

Hares and Tortoises: Indonesia's Regional Development Kaleidoscope

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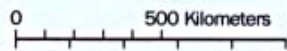
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Scale 1:36,000,000 at Equator

Mercator Projection



Big Questions:

1. Which are the 'richest' regions (ie, above average income) of Indonesia?
2. And the poorest?
3. Are the 'richest' and poorest the same now as in the 1990s? 1970s?
4. What's happening to inequality between regions? Is the gap between the western and eastern regions widening?
5. Does being 'rich' mean a lower poverty incidence? And vice-versa?
6. Does it matter whether the unit of analysis is the province or the kabupaten?
7. Has regional autonomy, ie since 2001, made a difference?

Organization

Introduction

The Big Picture

The Provincial Picture

Digging Deeper: the Kabupaten Picture

Summing Up

(1) Introduction

2012: 34 provinces, 497 kabupaten/kotamadya, 6,994 kecamatan, 72,944 kelurahan.

Approximate. And counting!

Indonesia the world's largest archipelagic state, and one of the most diverse. Regional income differences as much as 50:1.

Different regions have different dynamics. Eg, AFC: Sumatran agricultural exporters v/s Jakarta finance sector.

And administratively complex. (Ali Alatas quote.)

2001 generally regarded as a 'big-bang' decentralization.

Owing to pemekaran, ie, frequent border changes, very difficult to construct a consistent long-term series of social and economic indicators. So the analysis has to be constructed with reference to pre-decentralization boundaries and units.

(2) The Big Picture

Where is the major economic activity located, and is it changing over time since the 1970s?

See Figure 1 and Table 1.

Reasonably stable shares among the major regional economies.

Java-Bali the largest, and increasing; even without Jakarta.

The major change: Jakarta rising; and its share understated.
Java-Bali total 60%.

Sumatra declining, mainly in the 1970s-80s; mainly Riau.

Kalimantan approaching 10%.

Sulawesi and rest of Eastern Indonesia both stable, small, less than 5%.

(2) The Big Picture (cont)

On relativities – per capita income – some changes.

The inexorable rise of Jakarta: from more than double in 1970s to quadruple now.

Rest of Java-Bali rising, but still below national average.

Kalimantan stable, well above the national average.

Sumatra declining from the 1970s, but still slightly above average.

Sulawesi and Eastern Indonesia well below average, fairly stable since the 1990s.

The gap between the two richest provinces and the poorest (Maluku) now extremely large, about 16:1

Figure 1: Proportion of GRP/capita by Islands

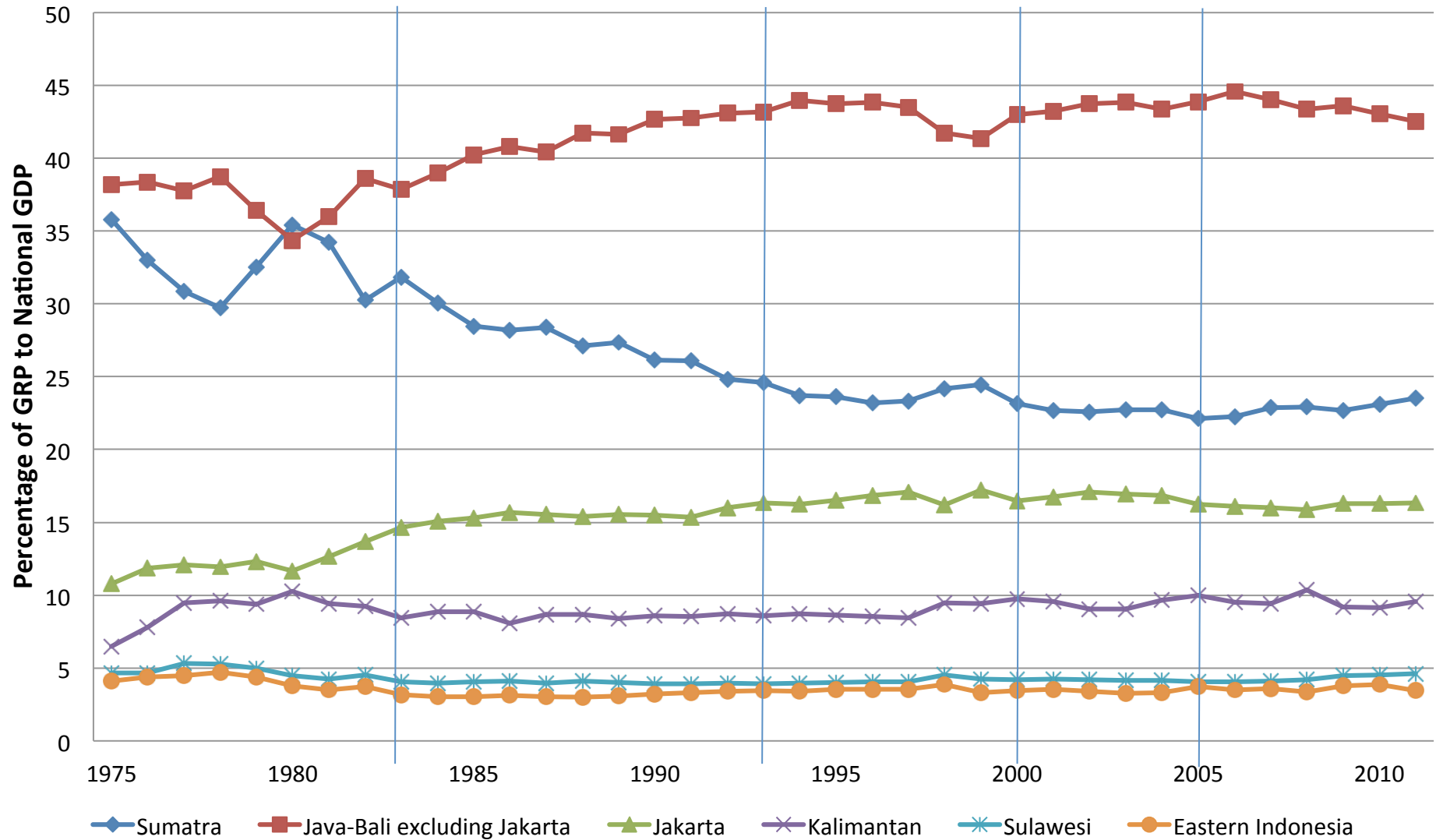


Table 1: GRP by major island group

percentage of total (national) GRP				
	1975	1990	2000	2010
Sumatra	35.8	26.1	23.2	23.1
Java-Bali excluding Jakarta	38.2	42.6	43.0	43.0
Jakarta	10.8	15.5	16.5	16.3
Kalimantan	6.5	8.6	9.8	9.2
Sulawesi	4.7	3.9	4.2	4.5
Eastern Indonesia	4.1	3.2	3.4	3.9
GRP per capita relative to national average = 100				
	1975	1990	2000	2010
Sumatra	197.1	127.8	110.3	108.4
Java-Bali excluding Jakarta	62.9	74.6	76.3	78.2
Jakarta	262.3	335.3	405.2	402.8
Kalimantan	145.9	168.9	177.7	157.9
Sulawesi	65.4	55.6	58.0	61.9
Eastern Indonesia	75.0	56.9	58.1	60.1

(3) The Provincial Picture

Working with '26 provinces' since the 1970s. 4 main groups.

See Table 2.

1. Always well above average – Jakarta, East Kalimantan (especially); Riau, Papua.

That is, capital city and natural resources.

2. Always relatively prosperous, about one-quarter above or below the national average – the other three Kalimantan provinces; East and West Java; Bali; North, South, West Sumatra, Jambi.

3. Moderately poor, about 50-70% of the national average – Central Java, Yogyakarta; all of Sulawesi; Lampung.

4. The poorest provinces, less than half the national average – East & West Nusa Tenggara (though diverging); Maluku; Bengkulu.

And Aceh, impossible to classify.

Table 2: GRP/capita (national average = 100)

	1975	1990	2000	2010
Aceh	98.4	219.2	168.0	77.9
North Sumatra	86.7	87.7	90.8	95.3
West Sumatra	70.8	72.4	80.8	80.8
Riau	1,504.4	514.0	286.9	259.5
Jambi	74.8	58.2	59.5	78.1
South Sumatra	123.1	94.1	92.0	95.3
Bengkulu	52.4	56.9	47.2	48.8
Lampung	57.6	41.5	53.1	63.9
Jakarta	262.3	335.3	405.2	402.8
West Java	73.9	82.6	83.0	78.9
Central Java	39.0	52.4	55.1	61.6
Yogyakarta	64.5	67.0	65.0	59.2
East Java	72.9	84.0	87.5	93.3
Bali	72.3	99.4	82.2	76.9
West Nusatenggara	38.9	33.1	45.5	49.4
East Nusatenggara	41.1	35.6	30.2	26.6
West Kalimantan	78.7	77.9	72.1	61.8
Central Kalimantan	85.9	94.8	88.6	86.5
South Kalimantan	72.8	89.0	94.9	74.0
East Kalimantan	507.1	491.3	519.2	406.7
North Sulawesi	92.0	63.2	67.3	61.0
Central Sulawesi	51.6	51.4	58.6	63.6
South Sulawesi	62.4	55.5	57.0	62.9
South East Sulawesi	42.3	48.0	47.6	57.0
Maluku	75.5	65.1	35.0	23.5
Papua	241.2	138.2	150.9	143.2

(3) The Provincial Picture (cont)

What of the dynamics over time?

We look at 'initial', ie 1975, incomes, and changes over time.

See Figures 2a & 2b; 4 quadrants. Upper right is 'rich and getting richer', relative to the rest; bottom left is 'poor and getting poorer'.

Figure 2a, the outliers; confirms Jakarta's status, the resource-rich group slipping.

Figure 2b, the rest.

Two 'success stories' – East Java, North Sumatra.

Three poor, slipping – NTT, Maluku, Bengkulu. Maluku the sharpest decline.

The rest are 'equalizing cases', ie above average income initially, but slower growth, or below average initially and faster growth.

Figure 2a

4 Quadrants

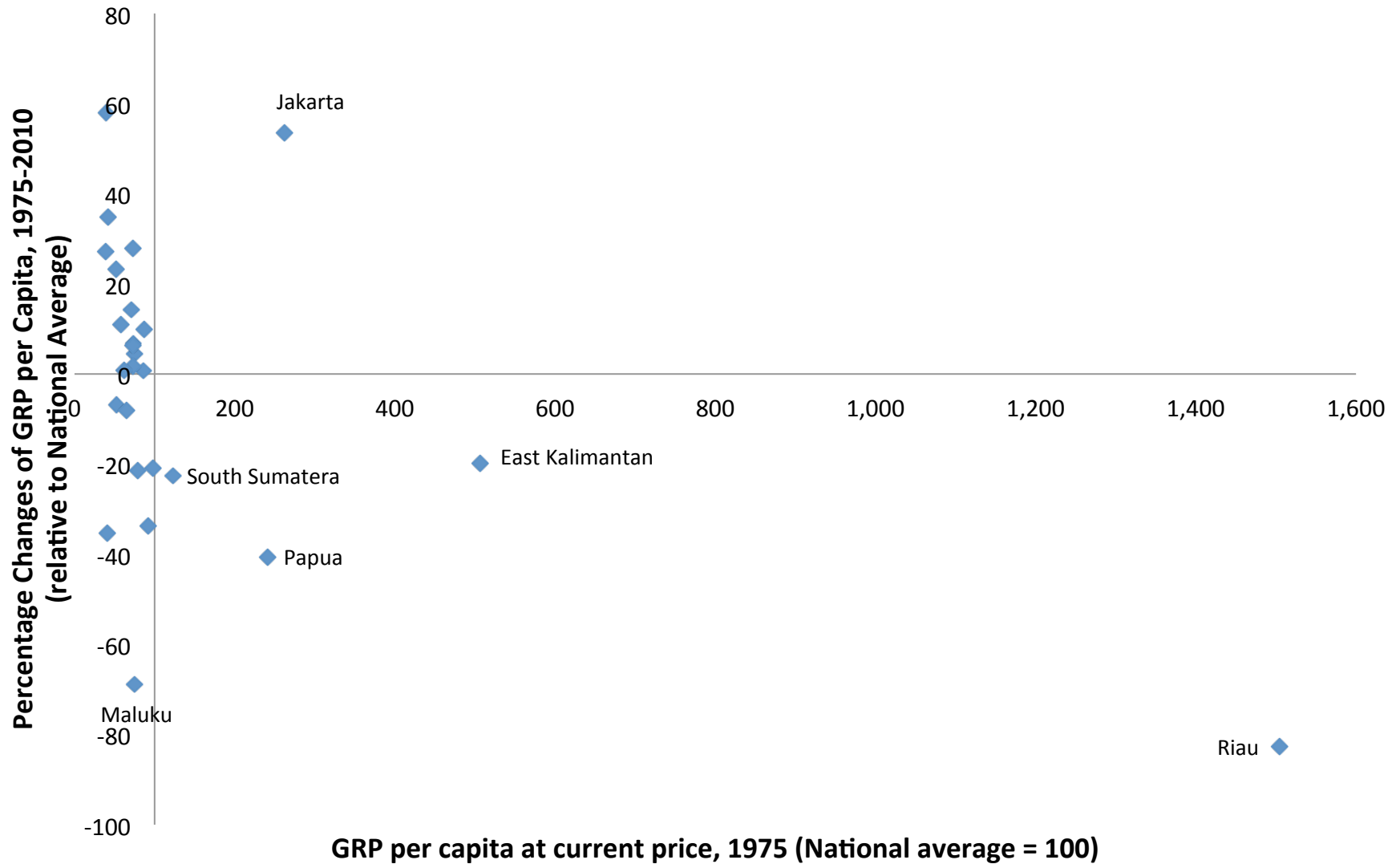
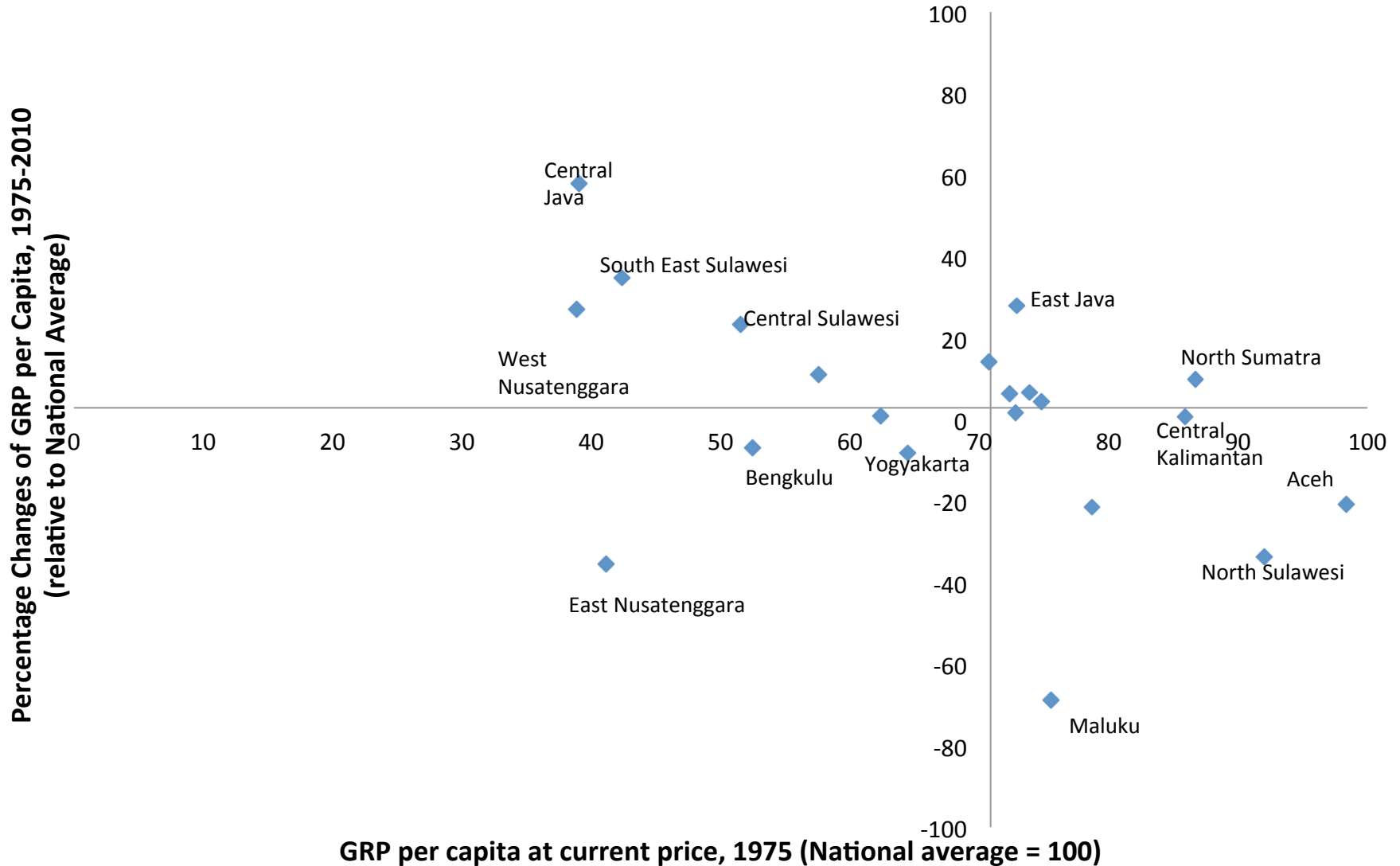


Figure 2b

4 Quadrants



(3) The Provincial Picture (cont)

What explains these large differences? A big issue!

Important factors:

1. A capital city story – Jakarta.
2. International orientation – Bali tourism, West Java industry, etc.
3. Natural resources – though can be volatile, enclave/unequal.
4. Strong, diversified economies, combining several factors – East Java, North Sumatra.
5. Conflict (Maluku, Aceh), isolation (NTT).

Yogya a continuing puzzle!

(3) The Provincial Picture (cont)

What about overall trends in inter-provincial inequality?

We employ a widely used measure of inequality, the coefficient of variation, across provincial per capita incomes, for 1975-2010:

$$CV_W = \frac{\sqrt{\sum_{i=1}^n (Y_i - \bar{Y})^2 \frac{P_i}{P}}}{\bar{Y}}$$

That is, the higher the figure, the higher the inequality.

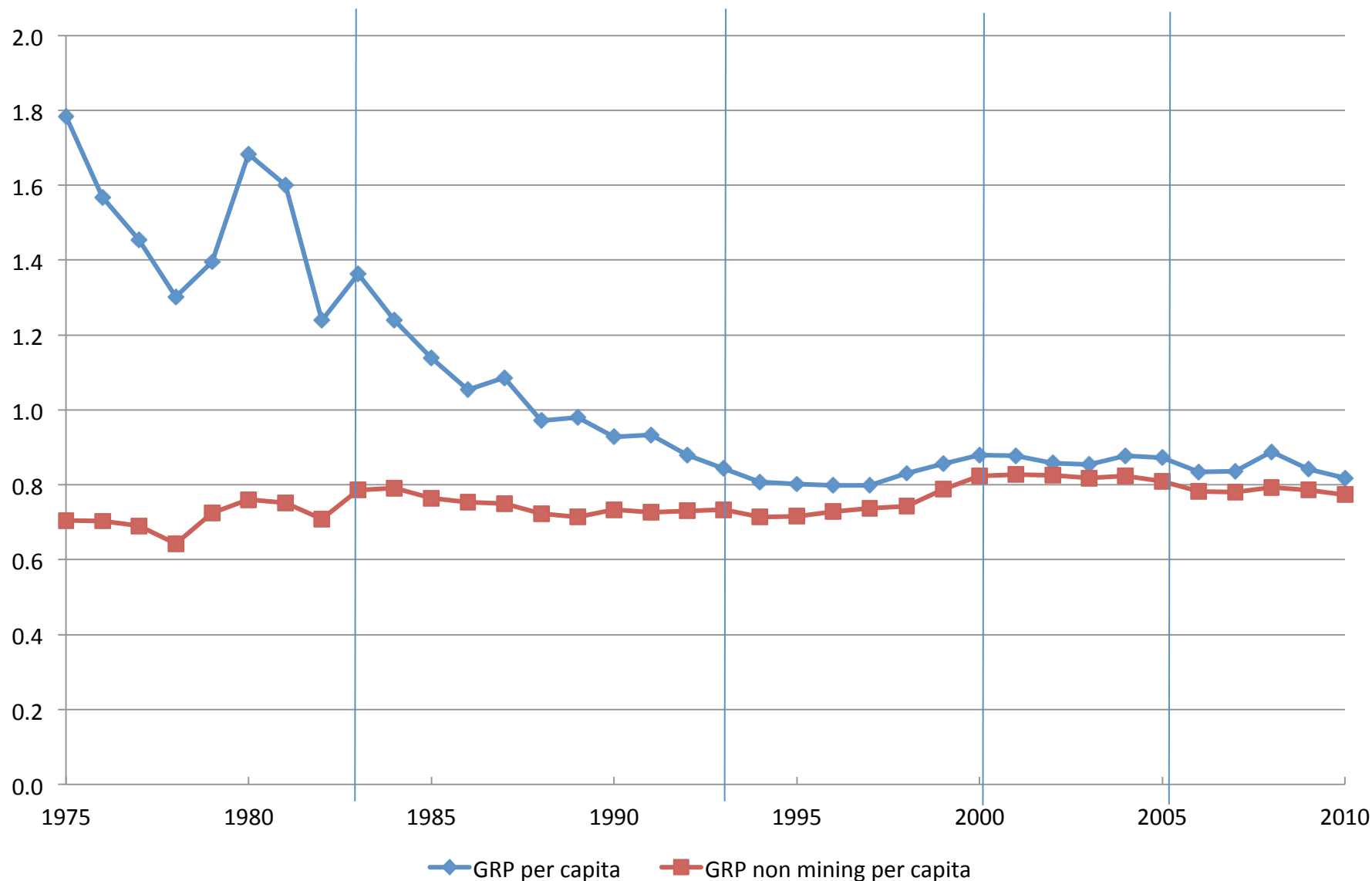
We calculate it for two series – total income, and the total excluding the mining sector. The latter a more accurate indicator.

See Figure 3. For the non-mining series, the trend is clear – no significant change in overall inequality, including – contrary to popular perceptions – the period since decentralization. This is consistent with the story in Figures 2a & 2b.

Though inequality is still high.

The total income series declines from very high initial levels, as the share of mining has declined over time.

Figure 3: Regional Inequality (Williamson Index)



(3) The Provincial Picture (cont)

Is per capita income a good guide to general living standards and social indicators? How closely associated are incomes and poverty across provinces?

We look at levels and movements in both provincial incomes and poverty incidence across provinces in 1996 – pre-crisis and pre-decentralization – and 2011. See Figure 4.

General picture, for levels:

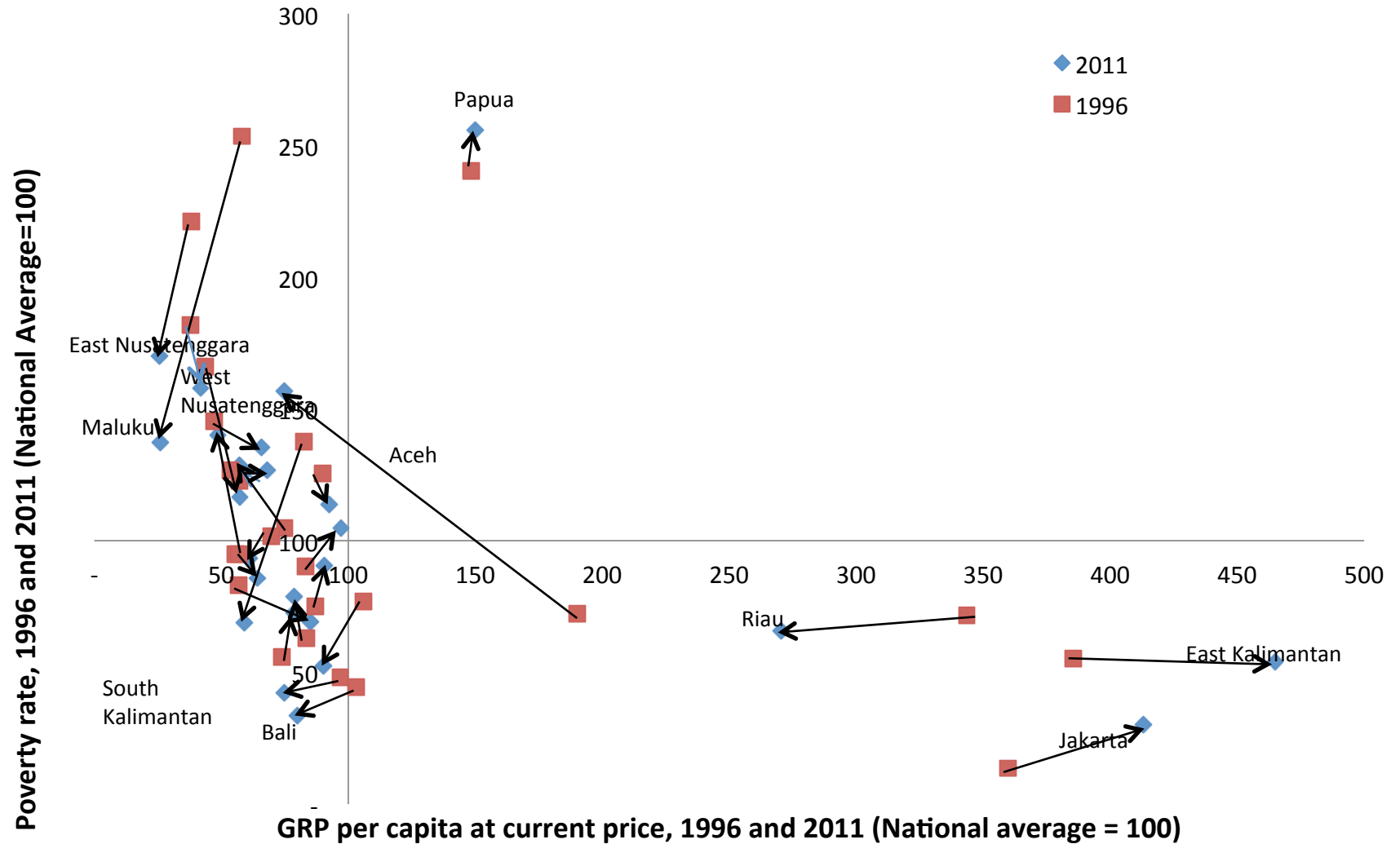
The higher the income, the lower the poverty incidence – the three richest have amongst the lowest poverty.

But, plenty of exceptions.

Papua the most extreme – above average income, but one of the highest poverty rates. Indicative of very uneven development, mining enclaves.

Also some provinces with average incomes have very low poverty. Eg, Bali, suggesting the positive effects of the labour-intensive tourism industry.

Figure 4



(3) The Provincial Picture (cont)

What of changes over time in both income and poverty – do they move in the same direction? Again, recall we are measuring relatives.

Here the picture is more mixed, need local level research to understand the outcomes.

Note some 'unusual' examples, snapshots:

Papua – poverty worsened as the relative income position remained similar.

Aceh – a dramatic deterioration in both variables.

Maluku and NTT – lower incomes over time, though not for poverty.

Bali – relative income dropped, though poverty continued to decline.

(3) Digging Deeper: Perspectives from the Kabupaten

How does the story change if the unit of analysis is the kabupaten?
(and using 'kabupaten' to refer to both kabupaten and kotamadya)

Compared to the provinces, the analysis differs in three respects:

1. The data are available for a shorter time period, from mid 1990s.
2. The number of kabupaten are very large, so not possible to investigate individual circumstances.
3. The process of pemekaran has been deeper, so caution in how we interpret the data, since we have to use 1999 boundaries.

The richest and poorest, in terms of per capita income?
See Table 3.

The richest: Jakarta dominates, especially its CBD, and Kaltim.
Also Kediri (kretek!), Batam City, Papua districts.

That is, mostly capital cities, national or regional, high value service providers; and natural resource enclaves.

No major changes over time.

Table 3: Highest and Lowest Districts (GRP/capita)

Per capita GRP (national = 1) at current price		
	1999	2011
Highest		
1	KUTAI(10.24), EAST KALIMANTAN	CENTRAL JAKARTA(11.89), D K I JAKARTA
2	KEDIRI CITY(9.25), EAST JAVA	KEDIRI CITY(10.13), EAST JAVA
3	CENTRAL JAKARTA(9.11), D K I JAKARTA	KUTAI(8.1), EAST KALIMANTAN
4	BERAU(5.14), EAST KALIMANTAN	FAK-FAK(6.22), PAPUA
5	NORTH JAKARTA(4.25), D K I JAKARTA	BENGKALIS(4.96), RIAU
6	BATAM CITY(4.18), RIAU	NORTH JAKARTA(4.68), D K I JAKARTA
7	BALIKPAPAN CITY(3.9), EAST KALIMANTAN	SOUTH JAKARTA(4.34), D K I JAKARTA
8	NORTH ACEH(3.68), ACEH	SURABAYA CITY(3.54), EAST JAVA
9	SOUTH JAKARTA(2.87), D K I JAKARTA	BALIKPAPAN CITY(3.26), EAST KALIMANTAN
10	EAST JAKARTA(2.7), D K I JAKARTA	MANOKWARI(2.87), PAPUA
Lowest		
1	WEST SUMBA(0.23), EAST NUSATENGGERA	CENTRAL MALUKU(0.16), MALUKU
2	MANGGARAI(0.24), EAST NUSATENGGERA	MANGGARAI(0.18), EAST NUSATENGGERA
3	SOUTH CENTRAL TIMOR(0.25), EAST NUSATENGGERA	NORTH CENTRAL TIMOR(0.18), EAST NUSATENGGERA
4	GROBOGAN(0.26), CENTRAL JAVA	JAYAWIJAYA(0.19), PAPUA
5	SAMPANG(0.26), EAST JAVA	WEST SUMBA(0.2), EAST NUSATENGGERA
6	NORTH CENTRAL TIMOR(0.26), EAST NUSATENGGERA	ALOR(0.2), EAST NUSATENGGERA
7	CENTRAL MALUKU(0.26), MALUKU	NORTH MALUKU(0.21), MALUKU
8	EAST FLORES(0.27), EAST NUSATENGGERA	GROBOGAN(0.23), CENTRAL JAVA
9	BELU(0.29), EAST NUSATENGGERA	SOUTH EAST MALUKU(0.23), MALUKU
10	ALOR(0.29), EAST NUSATENGGERA	BELU(0.24), EAST NUSATENGGERA

(3) Digging Deeper (cont)

The poorest: NTT dominates, 5/10, 7/10 for the two years.

Also Maluku and Papua.

Mainly an eastern grouping, though Java also present (Grobogan, Sampang – Madura).

The gap between the richest or poorest also very large, and apparently increasing - 40:1, 70:1.

What of the extremes, highs and lows, for poverty? See Table 4.

Unlike the low incomes, the highest concentrations of poverty are in Papua, not NTT.

Indicating that Papua's relatively high per capita income is very misleading as a guide to welfare.

Again mostly an eastern phenomenon. Only Sampang in both years.

Among the lowest poverty regions, Jakarta features prominently.

Also Bali, with 2 kabupaten, even though not among the highest income group.

The rest a mixture of local circumstances, regional capitals, natural resource affluence, etc.

Table 4: Highest and Lowest Districts (Poverty)

Poverty rate (national = 1)		
	1999	2011
Highest		
1	PANIAI(3.42), PAPUA	JAYAWIJAYA(3.13), PAPUA
2	JAYAWIJAYA(3.37), PAPUA	PANIAI(2.9), PAPUA
3	CENTRAL MALUKU(2.75), MALUKU	MANOKWARI(2.9), PAPUA
4	NORTH CENTRAL TIMOR(2.75), EAST NUSATENGGA	YAPEN WAROPEN(2.48), PAPUA
5	SIKKA(2.71), EAST NUSATENGGA	BIAK NUMFOR(2.44), PAPUA
6	MERAUKE(2.48), PAPUA	EAST SUMBA(2.35), EAST NUSATENGGA
7	NIAS(2.43), NORTH SUMATRA	SOUTH EAST MALUKU(2.32), MALUKU
8	FAK-FAK(2.42), PAPUA	SAMPANG(2.32), EAST JAVA
9	CENTRAL HALMAHERA(2.41), MALUKU	WEST SUMBA(2.24), EAST NUSATENGGA
10	SAMPANG(2.36), EAST JAVA	SOUTH CENTRAL TIMOR(2.08), EAST NUSATENGGA
Lowest		
1	DENPASAR CITY(0.05), BALI	DENPASAR CITY(0.14), BALI
2	SOUTH JAKARTA(0.06), D K I JAKARTA	SAWAH LUNTO CITY(0.19), WEST SUMATRA
3	PIDIE(0.11), ACEH	BADUNG(0.2), BALI
4	EAST JAKARTA(0.12), D K I JAKARTA	EAST JAKARTA(0.23), D K I JAKARTA
5	BATAM CITY(0.12), RIAU	BALIKPAPAN CITY(0.26), EAST KALIMANTAN
6	BANDA ACEH CITY(0.13), ACEH	SOUTH JAKARTA(0.26), D K I JAKARTA
7	BITUNG CITY(0.14), NORTH SULAWESI	WEST JAKARTA(0.26), D K I JAKARTA
8	WEST JAKARTA(0.14), D K I JAKARTA	PEKAN BARU CITY(0.27), RIAU
9	PARE-PARE CITY(0.14), SOUTH SULAWESI	CENTRAL JAKARTA(0.27), D K I JAKARTA
10	BADUNG(0.14), BALI	BANJAR(0.3), SOUTH KALIMANTAN

(3) Digging Deeper (cont)

Figures 5 & 6 provide the full national picture for all kabupaten in map form, first for income, then poverty, for 1999 and 2011.

This effectively captures the first decade of decentralization.

These are quintiles, top 20%, next 20%, and so on. That is, relative incomes.

The patterns are broadly similar for the two periods, confirming in particular the generally higher living standards, and more even, in the western regions.

Some snapshots:

Much of eastern and southern Kalimantan relatively prosperous, especially in 2011, suggesting the commodity boom has been distributed quite widely.

Compared to Papua, where extremes of high and very low incomes co-exist.

Almost all the rest of eastern Indonesia is poor, except mainly for the two major cities, Makassar and Manado.

(3) Digging Deeper (cont)

Most of Sumatra moderately well off, with high-income pockets in North & South Sumatra, and Riau.

Most of the low-income regions in the south-west and Aceh.

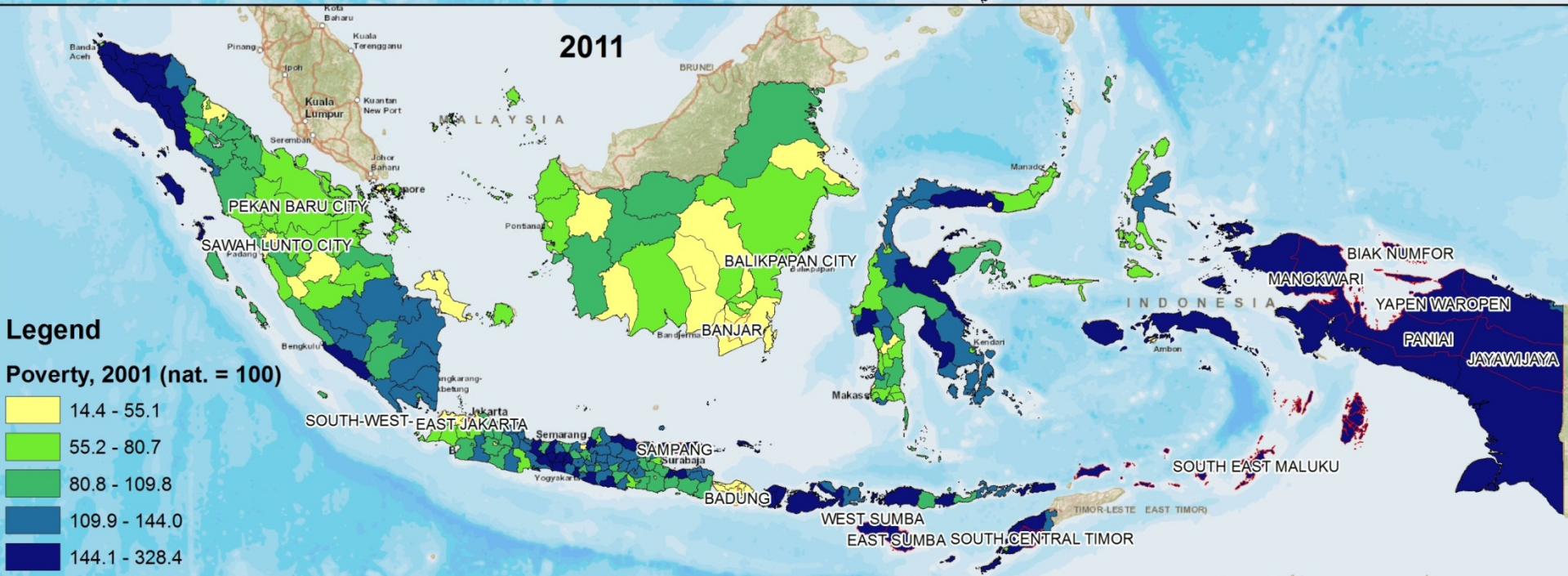
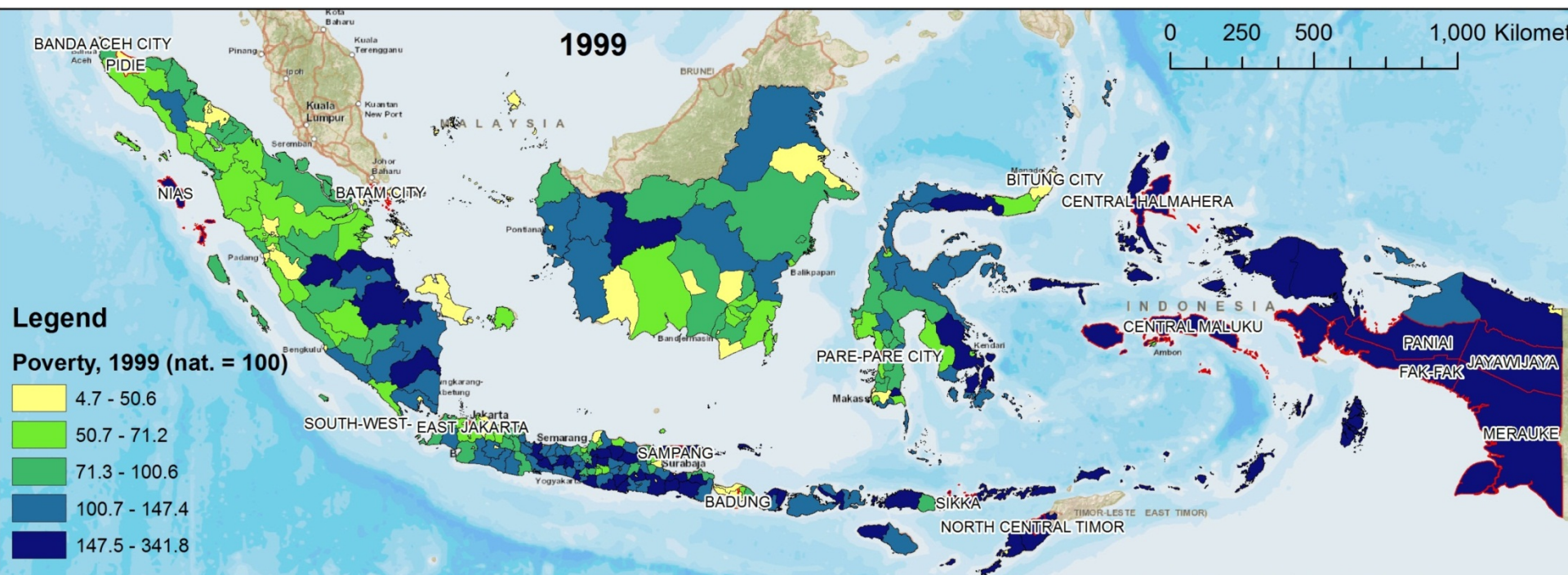
Java displays the familiar north-south divide, along with urbanization, especially the cities of Jakarta, Bandung, Surabaya, Kediri.

The poverty story is similar – concentrated mainly in the east, and gradually ‘migrating’ further eastwards over time, apart from the special case of Aceh.

Papua’s serious problems are again evident.

Though important to remember that these are shares of each local population.

That is, there are still several poor regions in Java, and their numbers are larger in absolute terms.



(3) Digging Deeper (cont)

What of changes in incomes over time?

See Figure 6. 4-quadrant analysis again: 1999 incomes, and changes over the period 1999-2011. Again, capturing the first decade after 2001.

Most of the relativities don't change greatly.

Again, a slight majority of observations fall in the two 'convergence quadrants', that is, relatively poorer growing faster, relatively richer growing slower. This indicates no increase in inter-kabupaten inequality, and possibly a slight decline.

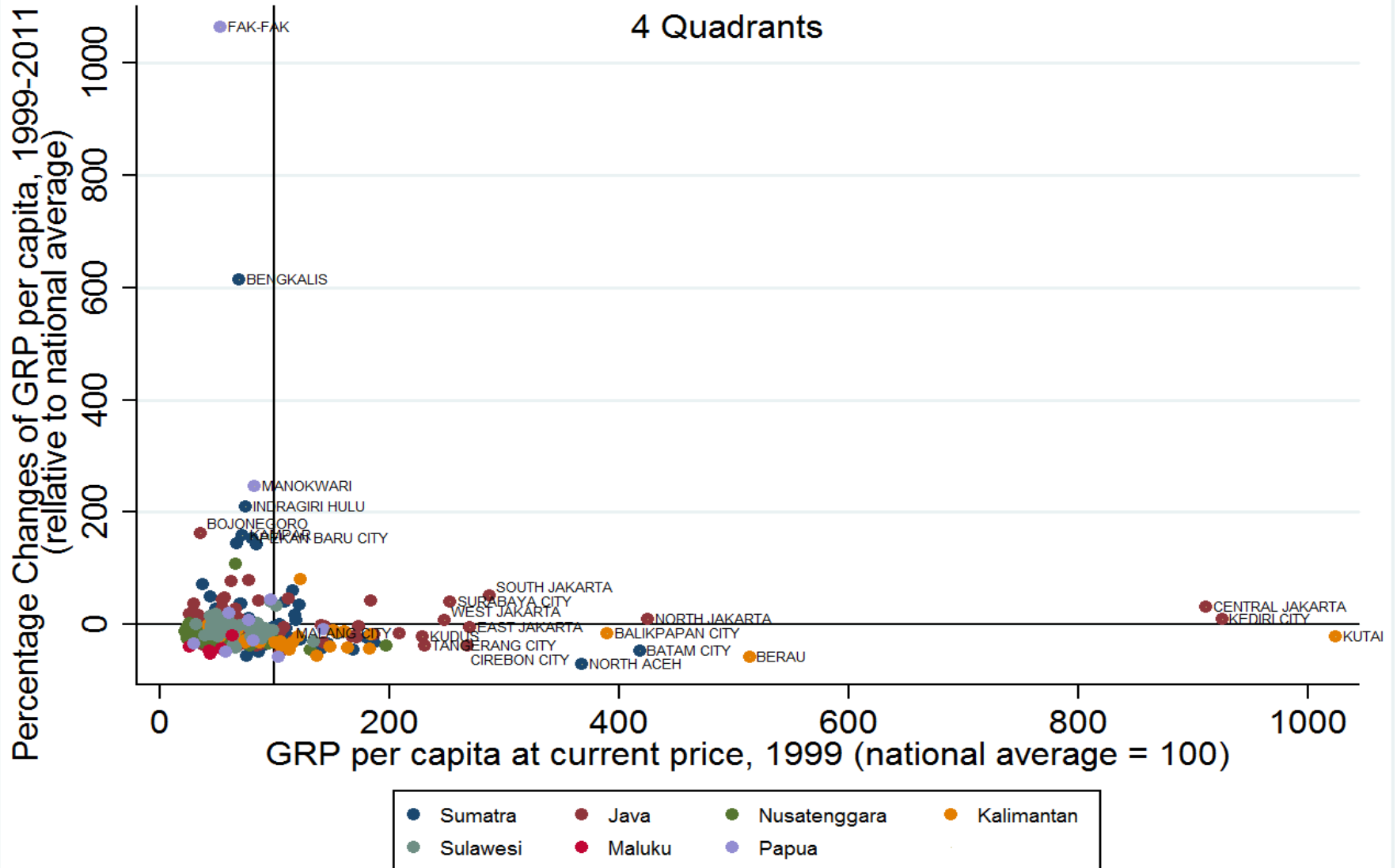
Focusing on the outliers:

Almost all the observations in the top right are cities, Jakarta again prominent, suggesting a broad widening of urban-rural differentials.

The dramatic increases in relative incomes are both resource-rich districts – Bengkalis and Fak-Fak.

But again the neighbourhood or 'spillover' effects in these cases are limited.

Figure 6



(3) Digging Deeper (cont)

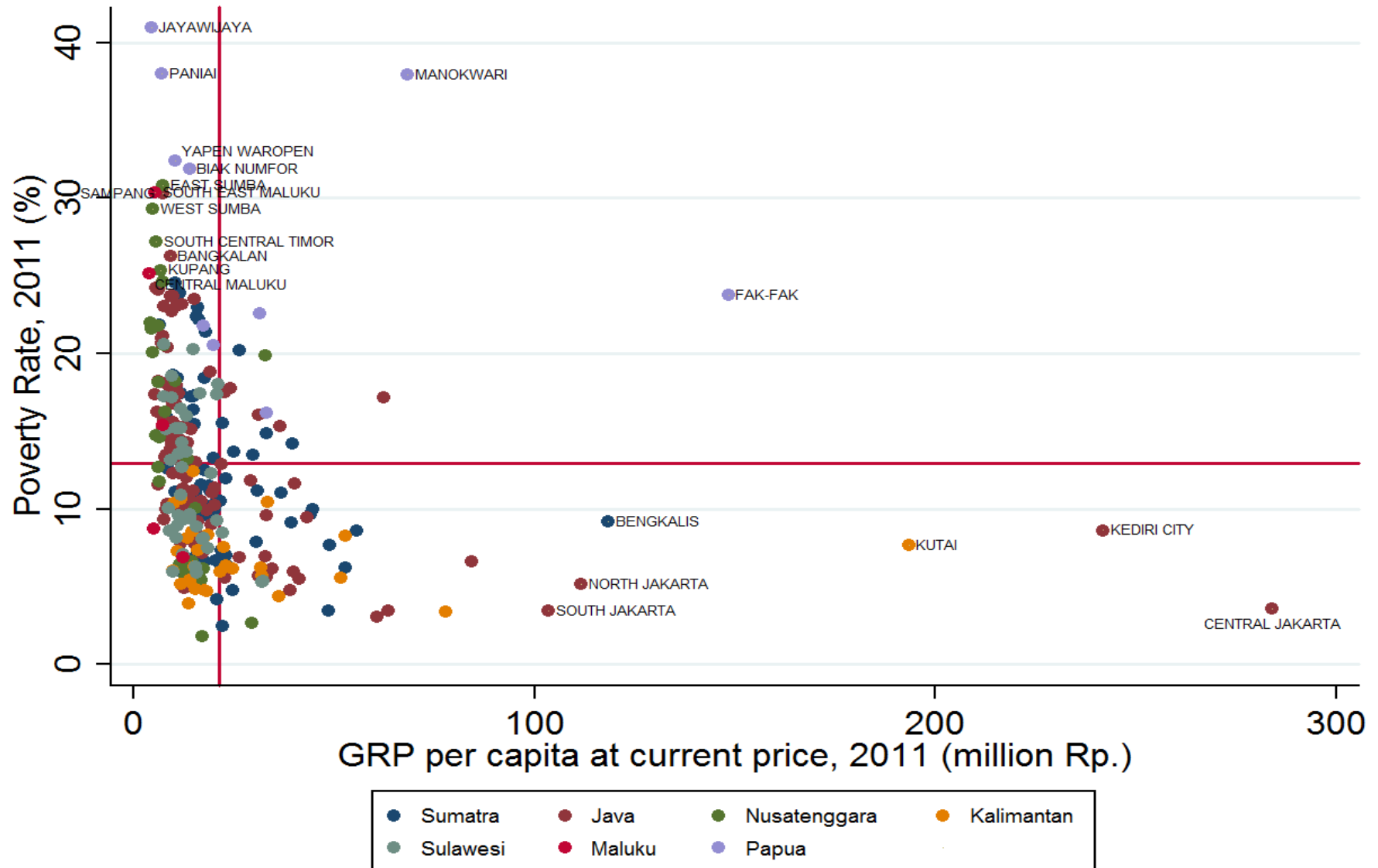
What of the income-poverty relationship?

See Figure 7 for the story in 2011.

We hypothesize that high income and low poverty go together, ie, lower right quadrant, and also low income-high poverty, ie, upper left quadrant.

This is the most common outcome. But again Papua is the main exception, with both Fak-Fak and Manokwari having both incomes and poverty incidence well above the national average.

Figure 7



(3) Digging Deeper (cont)

How have incomes and poverty changed over the period 1999-2011?

See Figure 8.

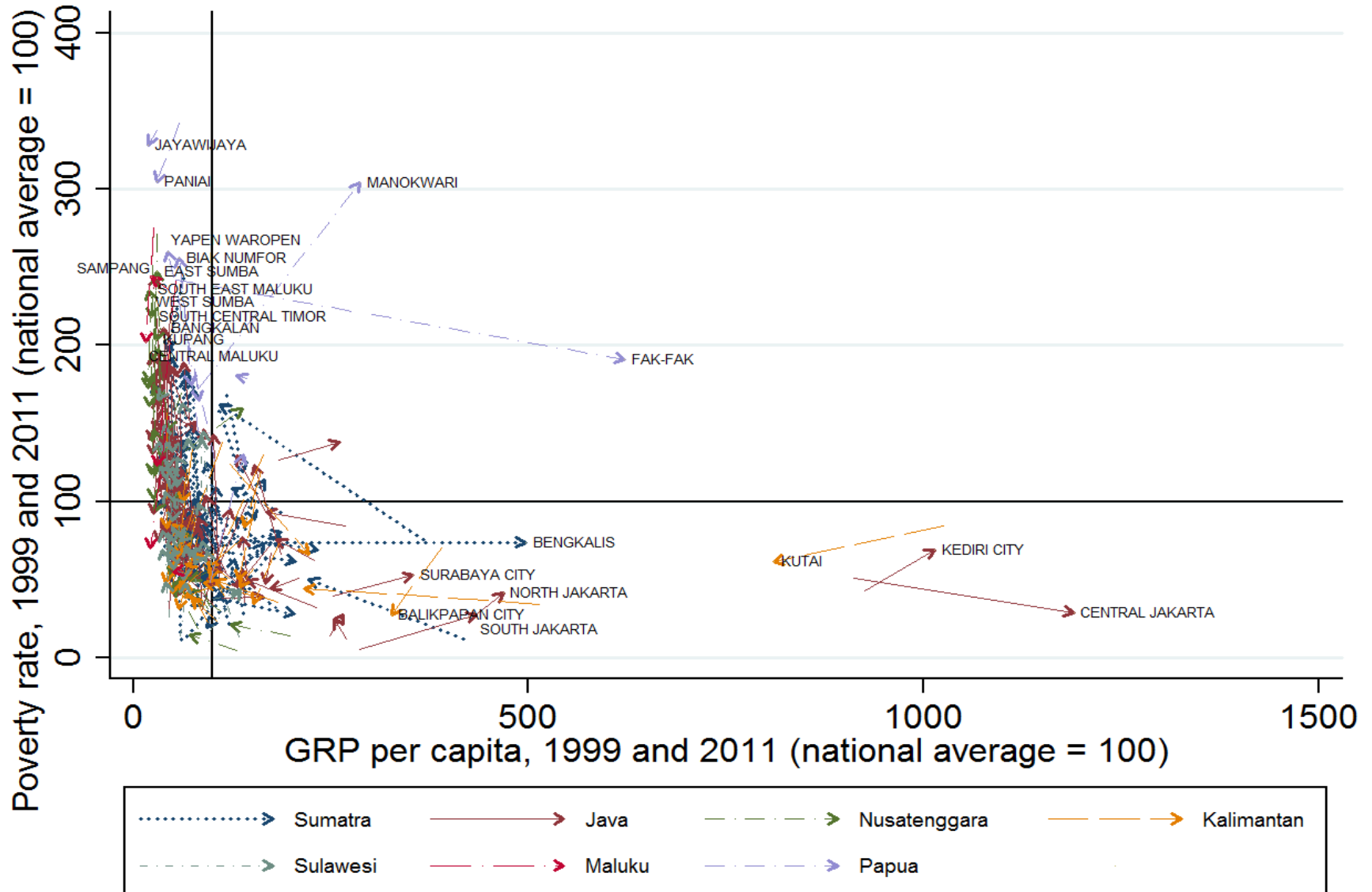
On the right side, movements further to the right indicate rising relative incomes. If the arrows slant downwards, relative poverty is declining.

Most of the areas with relatively strong growth were initially in the 'below poverty' group, especially the bottom right quadrant.

Again, cities are doing better, mostly (but not always) with declining relative poverty.

But the story for resource-rich regions is mixed, with Papua again the outlier, and even within it, diverging outcomes, eg Fak-Fak, Manokwari.

Figure 8



(5) Summing Up

What have we learnt?

1. Some continuities: Very large differences in living standards between regions.
2. The western regions continue to be more dynamic than the east. Especially Jakarta, West & East Java, Bali, much of Kalimantan and parts of Sumatra.
3. Also, NTT continues to languish. Joined by Maluku, owing to conflict. Papua the nation's most complex development challenge.
4. Economic and social indicators tend to move together, but some important exceptions.
5. Inequality fairly high, but no sign of an increase (eg, different from the other Asian giants, China and India).
6. Jakarta continues to pull away from the rest of the nation; becoming more 'Bangkok-like'?

(5) Summing Up (cont)

Does the story change if the unit of analysis is the kabupaten, rather than province?

The differences among districts are more glaring, as expected. Eg, between the Jakarta CBD, Kutai, etc, and the very poor eastern districts. But the major conclusions, of a fairly strong relationship between economic and social indicators, and a fairly stable pattern of inter-regional inequality, still hold.

Has regional autonomy had a discernible impact? Evidently no – 2001 and its aftermath does not introduce a major discontinuity.

Is this a surprising conclusion? Arguably not:

1. Still early days for decentralization, takes time for major institutional changes to have an effect, eg, for settled administrative arrangements between centre and regions, for local capacities to develop. Plus frequent changes to the system, pemekaran, etc.
2. Many other factors affect regional dynamics, eg, commodity boom since 2005; under-investment in infrastructure holding back regions, etc.

For further information, see:

http://web.natsem.canberra.edu.au/maps/INA_DEV/atlas.html

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