TRANSITION POLICIES TWENTY YEARS LATER: LESSONS FOR THE CASE OF CUBA

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Economic outcomes have differed widely across the countries that have transitioned away from centrally planned economies. Since 1989, the centrally planned economies of Eastern Europe and the former Soviet Union have moved to dismantle centralized control and allow market mechanisms to allocate resources to differing degrees and at different paces. This paper looks back at these episodes, as well as to China and Vietnam to a lesser extent, in an attempt to identify the policy paths that increase the likelihood of long-term wellbeing in the transitioning economy.

The methodology presented attempts to take a broad view of what a successful economic transition looks like. To measure well being, the paper uses three measures, rather than just the traditional real GDP growth. A successful transition is measured as one that increases real purchasing-power-parity-adjusted per-capita GDP growth over the last two decades, while also containing increases in the misery index and maximizing the UN Human Development Index. Policy implementation is measured directly through the European Bank for Reconstruction and Development (EBRD) Transition Indicators, but also indicators of the breadth and speed of transition policy implementation are considered. Several controls are included to capture exogenous and non-policy changes that could be influencing these measures

of well-being, such as commodity shocks or immigration.

The data speak most clearly on the transition policies themselves (rather than the speed or breadth of policy implementation). The results suggest that liberalizing trade and foreign exchange markets while privatizing small enterprises (small businesses and all farms), large enterprises (assets divestment and effective corporate governance), and enterprises (increasing efficiency sufficiently to at least attract private financing) all grow income, lower the misery index and increase development. Price liberalization is found to increase income but it also lowers the HDI and increases the misery index (though not statistically significant). This can be offset through institutional arrangements that help control prices, such as EU accession or other monetary constraints. On the speed of transition, the data suggest that large privatizations should proceed slowly while competition policy (effective enforcement of competition policy; unrestricted entry to most markets) should not. The evidence on the breadth of policy implementation is inconclusive.

The study presents evidence that China and Vietnam observed similar misery index patterns as countries in Eastern Europe and Central Asia. Evidence is also presented that the initial development position of these two countries were much lower than in Europe.

Hence, the transition away from a central planned economy in these two countries was intended to essentially develop and industrialize these countries. Most cases in Eastern Europe and the former Soviet Union represented largely urbanized and industrialized economies that embarked in transitions to increase the efficiency of their economies. Consequently, China and Vietnam are rejected as comparators to Cuba, whereas the Eastern Europe and the former Soviet Union are not.

A FRAMEWORK FOR ANALYSIS

This section develops a simple exploratory empirical framework to attempt to capture the impact of transition policies on the measures of economic and social well-being. Equation 1 gives a broad view of the approach pursued, which is to regress each of the measures on a linear function of the transition policy indicators and economic and social fundamentals. Given the inherent challenges in identifying the impact of specific policies on the aggregate outcomes, several controls are introduced in the right-hand side.

$$[HDI, income, misery] = f(transition, fundamentals) \quad (1)$$

First, lagged dependent variables are introduced, along with macroeconomic controls for global output, interest rates, commodity prices and other indicators of the external economic environment. Second, controls for the initial conditions of each country are included, such as the share of agriculture in the economy, and indicators of the endowment of oil or natural gas. A fixed effect regression is run, which implicitly controls for other common factors such as distance to Moscow or Brussels. In addition, an index of integration into the European Union is included for trade area effects.[2] Finally, an issue that has been at the forefront of transitions in Europe and will likely play a role for Cuba is migration, so that three migration measures are included. The first measures total migration, the second high education migration, and the third highly educated migration in percent of total migration. For the example of real PPP per-capita GDP growth, the panel regression is:

$$dgdppc_{it} = \alpha_0 + \alpha_t + \alpha_1 dgdppc_{it-1} + \alpha_2 dgdppc_{it-2} +$$

$$\alpha_3 transition_{it-1} + \alpha_4 controls_{it-1} + \varepsilon_{it} \quad (2)$$

Equation 2 is estimated for 1989–2010 for twenty-nine countries as a fixed effect panel regression with robust standard errors. Separate regressions are run for each of the nine transition policy areas thereby including only one transition indicator on the right hand side per estimation. The estimate of interest is α_3 which captures the impact of the transition policy, its breadth and speed of implementation, on the measures of economic and social well-being. Transition indicators are included on the right-hand-side one at a time because (1) they are highly multicollinear; and (2) there is a risk that linear combinations of the (discrete, judgment based) transition indicators are spuriously correlated to broader variables indexing the economy. Either of these risks could lead to policy impact estimates that are unstable and misleading.
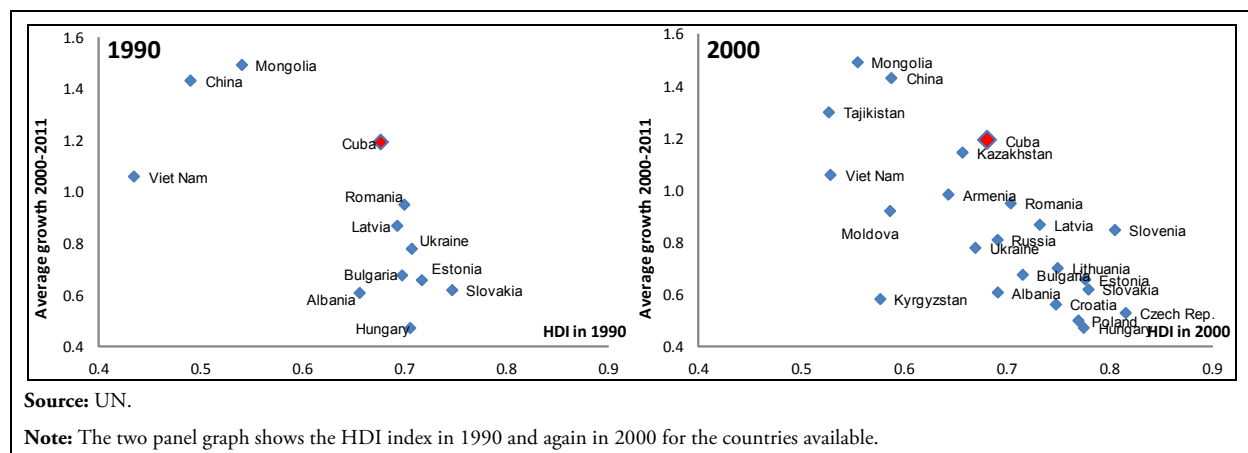
THE DATA

This section discusses the data utilized in the study to measure the impact of transition policy implementation on the three measures of public policy success.

Indicators of Positive Policy Outcomes

From the perspective of permanently improving the well-being of the population, alternative metrics are used to capture the impact of transition policies on long-term economic and social outcomes. In terms of raising incomes, the traditional metric of economic improvement would be some variant of real gross domestic product. Thus, the estimations below employ the annual growth in purchasing power-parity adjusted (PPP) real per-capita GDP. Real growth in PPP adjusted per-capita GDP terms thus captures the growth in inflation-adjusted per-capita national income expressed in internationally comparable terms. This is particularly important for non-traded goods and services often provided by governments, for example health and education services. The data are drawn from the International Monetary Fund's

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2. From Jaumotte and Sodsriwiboon (2010).

Figure 1.   The Human Development Index for a Sample of Transition Economies

Source: UN.

Note: The two panel graph shows the HDI index in 1990 and again in 2000 for the countries available.

World Economic Outlook database, the EBRD transition indicators, and Rose (2004).

The second outcome measure is the Human Development Index (HDI) produced by the United Nations. The Human Development Index is a composite statistic of life expectancy, education, and income.[3] Unfortunately, this measure is statistically the most difficult to produce, and hence, there is sparse coverage for many countries going back to 1989. Figure 1 shows the HDI in 1990 and 2000 against the compound average growth rate. As would be expected, higher developed countries grow more slowly.

The third measure is the misery index, which is the sum of inflation and unemployment. This index attempts to capture the social and political consequences stemming from the popular discontent associated with high rates of unemployment and inflation. The data source used here is the IMF World Economic Outlook (WEO) database.

China and Vietnam

The sample of countries used in this study is restricted to those followed by the EBRD, which does not include China and Vietnam.[4] We exclude China and Vietnam in part due to lack of homogeneous transi-

tion indicators, but also because (1) their transitions began much earlier (1978 for China, 1986 for Vietnam); and (2) economic transitions experienced in those countries were designed in large part to industrialize largely agrarian societies trapped in grinding poverty. As observed in Figure 1, both China and Vietnam were well below the mass of post-Soviet and Eastern European economies in terms of the HDI, despite having undertaken twelve and four years of transition, respectively, that delivered high annual real GDP growth rates. Even ten years later, these two countries were well behind the mass of transition economies, though quickly closing the gap (and catching up to Cuba, which did not transition).

Another important caveat regarding China and Vietnam is that at times the transition process in these Asian economies has been portrayed as less socially costly than in Eastern Europe and Central Asia. Notwithstanding the data limitations, were this to be the case, excluding these two countries from the sample could lead to selection bias in the result. Nevertheless, Figure 2 shows the misery index for China and Vietnam since 1980. For China, important caveats arise in interpreting inflation or unemployment data from the early 1980s that are beyond the scope of this study. In addition, data are unavailable prior to

3. See http://hdr.undp.org/en/humandev/

4. Countries included: Uzbekistan, Ukraine, Turkmenistan, Turkey, Tajikistan, Slovenia, Slovak Republic, Serbia, Russian Federation, Romania, Poland, Montenegro, Mongolia, Moldova, Lithuania, Latvia, Kyrgyz Republic, Kazakhstan, Hungary, Georgia, Macedonia, FYR, Estonia, Croatia, Bulgaria, Bosnia & Herzegovina, Belarus, Azerbaijan, Armenia, and Albania.

Figure 2.   Misery Index for Asian Transition Economies

Source: IMF World Economic Outlook Database, April 2012.

Note: Misery index computed as inflation plus employment. Inflation is the average monthly change in consumer prices. Unemployment is the number of unemployed in percent of the total labor force. For Vietnam, unemployment data is unavailable prior to 1990 so the index reflects inflation.
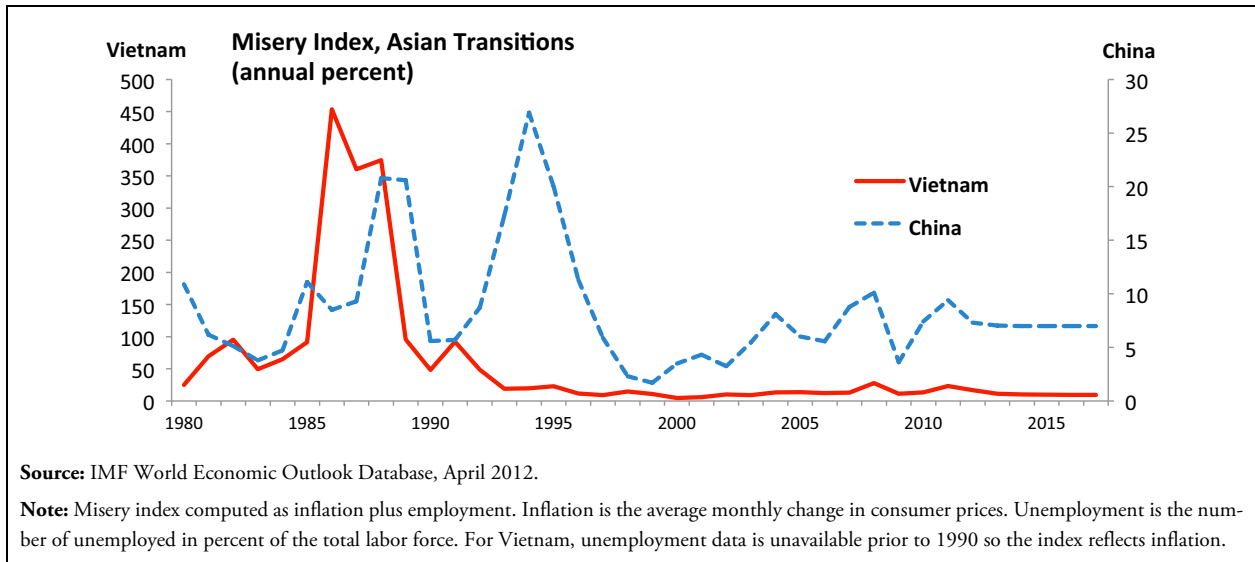
Figure 3.   Misery Index Across Transition Economies

Source: IMF WEO.

Note: Line graphs for the misery index for 29 transition economies shown for years 1999–2010; misery index outliers exceeding 5,000 are excluded and index scaled by 1/100 for graphing purposes.
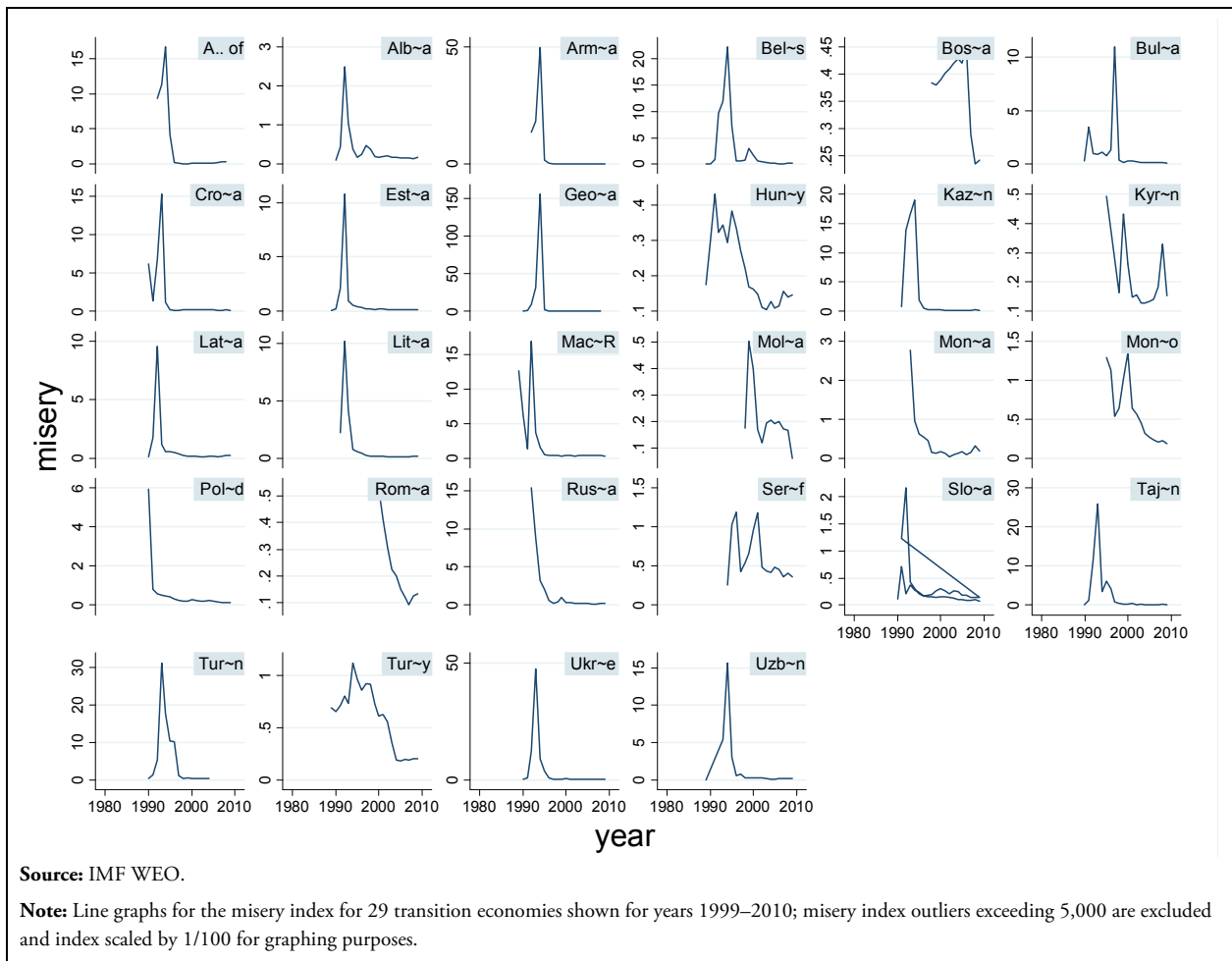
1980 so that the misery index at the start of the transition is not recorded in the graph. Nevertheless, the maximum value observed for China for the sample is 5.4 percent, which is approximately equal to Mongolia's sample maximum. In addition, the graph for China may, even with official inflation figures from the 1980s, be reflecting a decline from an initial elevated inflation rate at the start of its transition (1978). Figure 3 shows the evolution of the misery index for transition economies, and displays familiar spikes at the beginning of the transition period, and as is the case for Vietnam. The maximum value observed for the Vietnam case (which excludes unemployment until 1990 due to missing data) is 15.3, approximately equivalent to Croatia. Hence, both Vietnam and China likely experienced some variant of the familiar spike in the misery index associated with the start of economic transitions equivalent to countries in the sample (e.g., Mongolia and Crotia). Consequently, the exclusion of China and Vietnam is not a likely source of selection bias.

Table 1.   EBRD Transition Indicators

Transition Indicator	Best Case Scenario
1. Large privatization	75% of SOEs and farms private
2. Small privatization	100% small enterprises, tradeable land
3. Governance and enterprises	No soft budgets or subsidies, private investors
4. Price liberalization	No controls outside typical (e.g., housing)
5. Trade and foreign exchange	No administrative restrictions, tariffs, convertibility, WTO
6. Competition policy	Enforcement of competition, anti-monopoly and barriers
7. Banking and interest rates	BIS regulation, financial deepening, supervision
8. Securities and non-banks	IOSCO standards, liquid markets, insurance & pension funds
9. Infrastructure	Cost reflective tariffs, commercialized assets or maintenance

Source: EBRD Transition Indicators.

Transition Indicators and Control Variables

The EBRD publishes annual transition indicator scores that reflect the institution's judgment of country-specific progress in implementing transition policies.[5] Originally developed in the 1994 Transition Report, the scores are based on a nine-category classi-

fication system illustrated in Table 1. Broadly speaking, a country with a fully centralized economy would score unity across each of the nine categories. As policy changes are introduced to decentralize and introduce market reforms, the score increases to a maximum of approximately 4.33. Table 1 gives a rough description of what the fully transitioned market economy would look like in each category after achieving the highest possible score.

In addition to including each indicator as a regressor in individual regressions for each of the nine policy areas, two additional measures are developed to capture the speed of transition and the breadth of transition. Speed is measured as the weighted average years of transition policy implementation that elapsed between 1989 and 1999, where the weight given to each year is the change in the transition score. Hence, for each of the nine policy areas, the lower the speed score, the faster the country transitioned away from a decentralized policy framework in that area. The breadth of transition is scored simply as the percent of the total possible score that the country achieved between 1989 and 2010. It is simply the sum of the annual increases in the transition score per area of policy expressed as a percent of the total possible. There is only one measure of speed and breadth of transition per country over the period 1989–2010. Hence, when these are employed as right-hand-side variables, the left-hand-side variable is the change in the average level of the outcome measure (real per-capita PPP GDP growth, misery index, or HDI) from 1990 to 2010. This necessarily results in significantly fewer observations for these panel regressions, as they are able to only exploit the cross-section. Moreover, there are very few HDI observations since 1990, hence, for this measure there are even fewer observations.

Figure 4 illustrates the relationship between speed and breadth of transition and the three measures of well-being used here. Growth of real PPP GDP per capita (abbreviated *dgdppc* in the upper panel) appears positively correlated the speed score and negatively correlated with the breadth score. The misery

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5. See http://www.ebrd.com/pages/research/economics/data/macro/ti_methodology.shtml for details.

Figure 4.   Transition Speed and Breadth against Measures of Income and Well-being
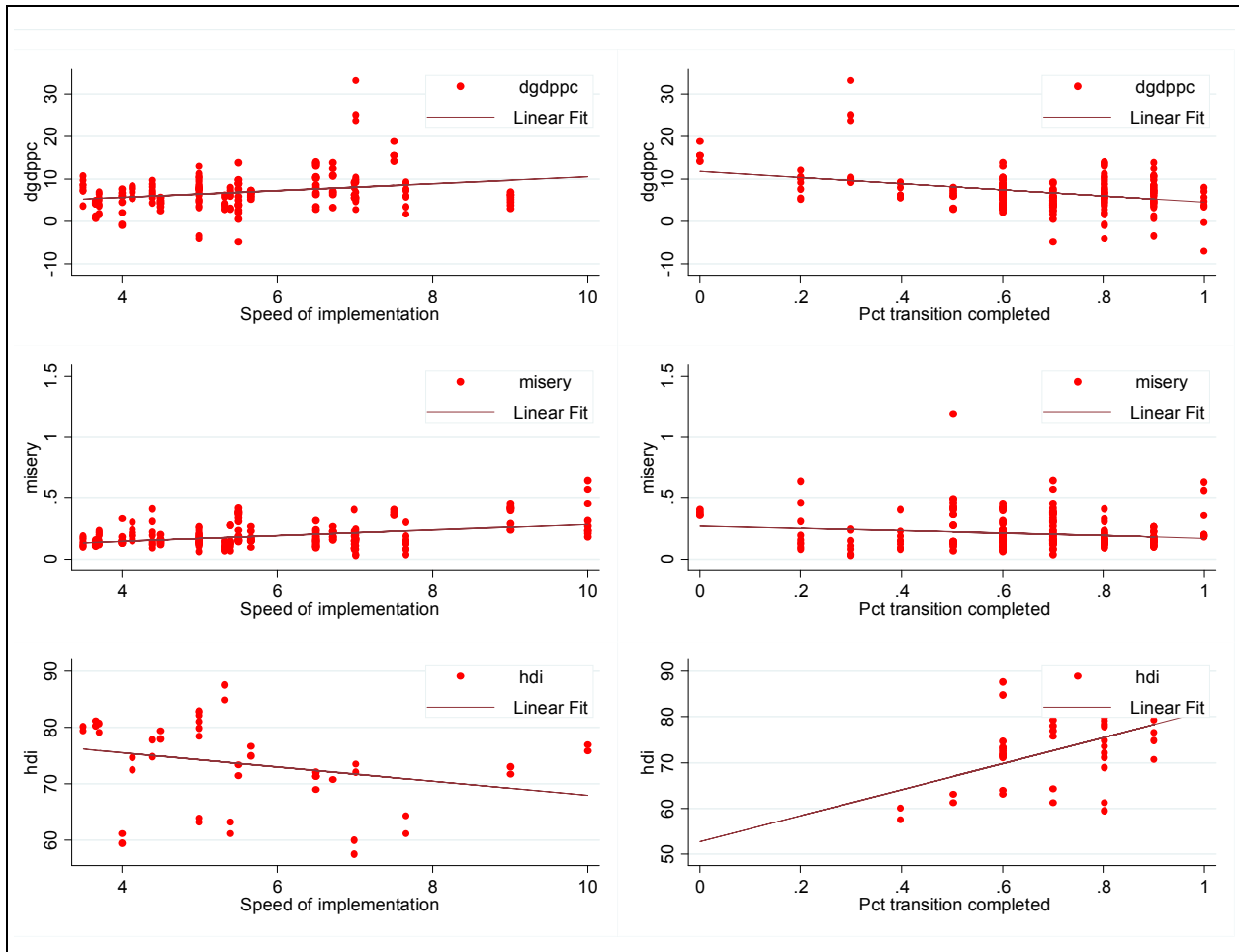
Source: EBRD, UN HDI, World Bank, IMF WEO.

Note: The columns represent the speed of implementation and the Percent of Policies implemented by 1999. Speed is measured as the weighted average number of years of policy implementation, with the weights being the transition indicators. The percent of full implementation that was achieved by 1999 is the measure shown in the right column. The upper row compares these against real per-capital purchasing-power parity (PPP) adjusted GDP growth. The middle row compares these against the misery index. The last row compares these against the Human Development index. Joint scatter plots for 29 shown for years 2000–2010, misery index outliers exceeding 5,000 excluded for graphing purposes, simple linear regression shown as line.

index (middle panel) also appears positively correlated with speed and negatively with breadth. Roughly speaking, this implies slower and less broad transition helps growth but also increases misery. It would be incorrect to draw conclusions from a scatter plot, however, as it does not control for country-specific effects or exogenous factors such as energy prices (which is why we employ panel regressions below). The HDI index shows a broadly negative relationship with the speed of transition but a positive relationship with the breadth of reforms, suggesting a slower but broader implementation of policies improves the HDI.

Turning to the other variables, equation 2 includes controls for nonpolicy and exogenous factors that reflect either the initial condition of the country or evolving exogenous factors that could impact transition outcomes. The estimations below have attempted to parsimoniously include the most important. Included are share of agriculture in the country, the global real GDP growth rate, the LIBOR interest rate, non-fuel commodity prices, the oil price, oil re-

Table 2.   Regressions of Bilateral Impact of Transition Measures on Income, Development, and Misery Index

Growth of PPP Real GDP Per Capita	Large Priv.	Small Priv.	Enterprises	Prices	Trade/FX	Competition	Banking	Non-bank	Infrastructure
Transition Control (see column)	2.27**	1.87*	4.03**	2.61***	1.91*	1.81	-0.52	-0.64	0.85
Share of Agg.	0.01	0.02	-0.08	0.05	0.05	0.03	-0.03	-0.04	-0.01
Global GDP growth	0.63	0.65	0.56	0.63	0.65	0.74	0.7	0.7	0.62
Libor	0.13	0.11	0.04	0.11	0.15	0.1	0.13	0.12	0.17
Non-fuel prices	0.03	0.02	0	-0.01	0	0.01	0.01	0	0.02
Oil price	-0.03	-0.02	-0.02	-0.01	-0.01	-0.02	-0.01	-0.01	-0.03
Oil rents	0.23***	0.22***	0.21***	0.21***	0.20***	0.21***	0.20***	0.21***	0.21***
Gas rents	0	0	0.01	0	0	-0.01	-0.01	-0.01	-0.01
EU integration	-3.83	-3.06	-4.15	-2.41	-2.48	-3.39	-1.25	-0.76	-2.65
Pct. High Edu. Of Migration	24.37***	24.45***	23.26**	22.16***	22.18**	29.30***	29.20**	28.72**	28.16**
Pct. Pop. Migrates	1.66	1.46	1.25	-0.59	0.92	2.6	2.5	1.61	1.84
Pct. Pop. w/ High Edu. Migrates	-6.65	-5.78	-6.4	-3.48	-5.14	-9.18	-8.49	-7.31	-7.41
N	152	152	152	152	152	152	152	152	152
R-squared	0.29	0.31	0.4	0.25	0.32	0.25	0.27	0.25	0.28

Human Development Index	Large Priv.	Small Priv.	Enterprises	Prices	Trade/FX	Competition	Banking	Non-bank	Infrastructure
Transition Control (see column)	0.42	2.41*	-0.63	-2.11*	2.11	0.05	0.01	0.02	-0.01
Share of Agg.	0.05	0	0.06	0.01	0.06	0.04	0	0	0
Non-fuel prices	0.03	0.03**	0.03*	0.02	0.03	0.03	0	0	0
Oil price	0.04**	0.04*	0.05***	0.04**	0.05**	0.04**	0.00**	0.00**	0.00***
Oil rents (% of GDP)	0.18	-0.16	-0.21	0.24	-0.84	-0.2	0	0	0
Gas rents (% of GDP)	-0.01	0.32	0.07	-0.03	0.34	0.12	0	0	0
EU integration	0.31	3.47	0.3	1.07	0.31	0.11	0	-0.01	0
Pct. High Edu. Of Migration	23.24***	8.96	22.17***	23.01***	12.83	22.89**	0.19**	0.26***	0.23***
Pct. Pop. Migrates	3.01**	2.39*	2.77**	3.40***	2.21	2.85**	0.03**	0.04**	0.03**
Pct. Pop. w/ High Edu. Migrates	-4.72**	-3.37**	-4.21***	-5.14***	-2.92	-4.42**	-0.04**	-0.06**	-0.05**
N	46	46	46	46	46	46	46	46	46
R-squared	0	0.1	0.01	0	0.01	0	0.03	0.03	0.02

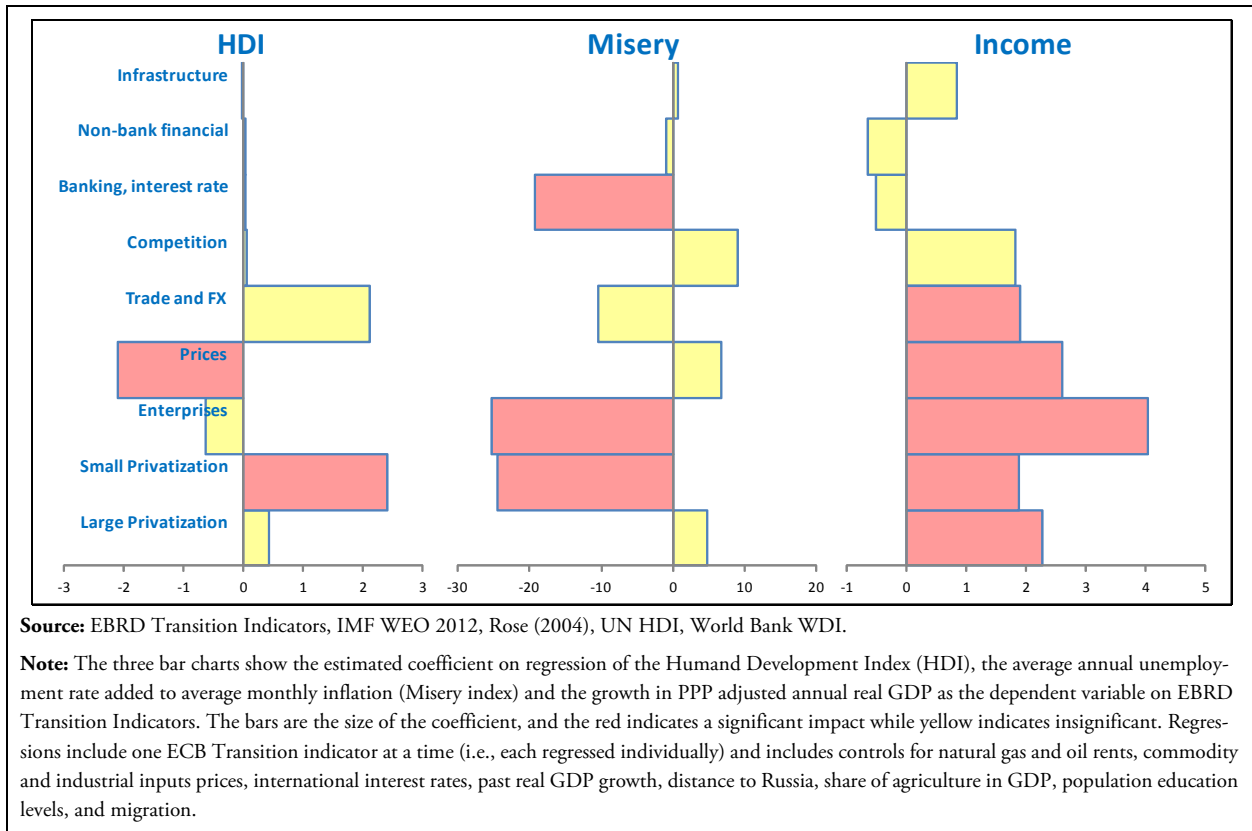| Misery Index	Large Priv.	Small Priv.	Enterprises	Prices	Trade/FX	Competition	Banking	Non-bank	Infrastructure
Transition Control (see column)	4.68	-24.52***	-25.28**	6.76	-10.49	9.02	-19.21*	-0.98	0.73
Share of Agg.	4.26*	3.40	4.19*	4.41**	3.80	4.30*	4.28*	4.20*	4.23*
Global GDP growth	-0.19	-0.08	0.37	-0.30	0.08	0.04	0.01	-0.16	-0.20
Libor	-1.13	-1.58	-1.06	-1.04	-1.50	-1.21	-1.51	-1.20	-1.13
Non-fuel prices	-0.03	-0.14	-0.01	-0.06	-0.05	-0.05	-0.06	-0.07	-0.05
Oil price	0.17	0.25*	0.18	0.19	0.18	0.17	0.27**	0.19	0.18
Oil rents	0.84	0.79	0.86	0.81	0.84	0.82	0.80	0.82	0.81
Gas rents	-0.14	-0.36**	-0.28*	-0.14	-0.23	-0.16	-0.24**	-0.16	-0.15
EU integration	-51.31**	-29.58	-25.87*	-49.49**	-42.68**	-54.07**	-39.30**	-46.21**	-48.23**
Pct. High Edu. Of Migration	-225.84**	-195.86**	-211.14**	-214.71**	-209.81**	-212.04**	-192.06**	-221.58**	-221.58**
Pct. Pop. Migrates	-28.60	-25.36	-25.33	-30.27	-25.86	-27.25	-26.32	-28.68	-28.21
Pct. Pop. w/ High Edu. Migrates	82.51*	69.47*	79.05*	83.72**	76.38*	76.15*	75.98**	82.60*	82.05
N	149	149	149	149	149	149	149	149	149
R-squared	0.3	0.37	0.28	0.29	0.32	0.31	0.26	0.3	0.3

Source: EBRD Transition Indicators, IMF World Economic Outlook Database, World Bank Development indicators, UN HDI, Authors' estimates.

Note: The three-panel table shows the estimates of a regression with the dependent variable being the annual change in the outcome indicators, which are the Humand Development Index (HDI), the misery index (the average annual unemployment rate added to average monthly inflation) and the growth in PPP adjusted annual real GDP. The independent variables are the EBRD Transition Indicators, migration indicators, and (not shown) lags of the dependent variable, and controls Global GDP growth, Libor, Non-fuel prices, Oil price, Oil rents (% of GDP), Gas rents (% of GDP), and EU integration. Statistical significance given by p<.1; ** p<.05; *** p<.01; fixed effect annual panel regression, 1989-2010.

lated income in percent of national GDP, natural gas income in percent of GDP, EU integration indicators, and migration indicators, including by level of migrant education. The sources for these data are the IMF World Economic Outlook Database for April

Figure 5.   The Impact of Transition Policies on Development, Misery and Income Measures

Source: EBRD Transition Indicators, IMF WEO 2012, Rose (2004), UN HDI, World Bank WDI.

Note: The three bar charts show the estimated coefficient on regression of the Humand Development Index (HDI), the average annual unemployment rate added to average monthly inflation (Misery index) and the growth in PPP adjusted annual real GDP as the dependent variable on EBRD Transition Indicators. The bars are the size of the coefficient, and the red indicates a significant impact while yellow indicates insignificant. Regressions include one ECB Transition indicator at a time (i.e., each regressed individually) and includes controls for natural gas and oil rents, commodity and industrial inputs prices, international interest rates, past real GDP growth, distance to Russia, share of agriculture in GDP, population education levels, and migration.

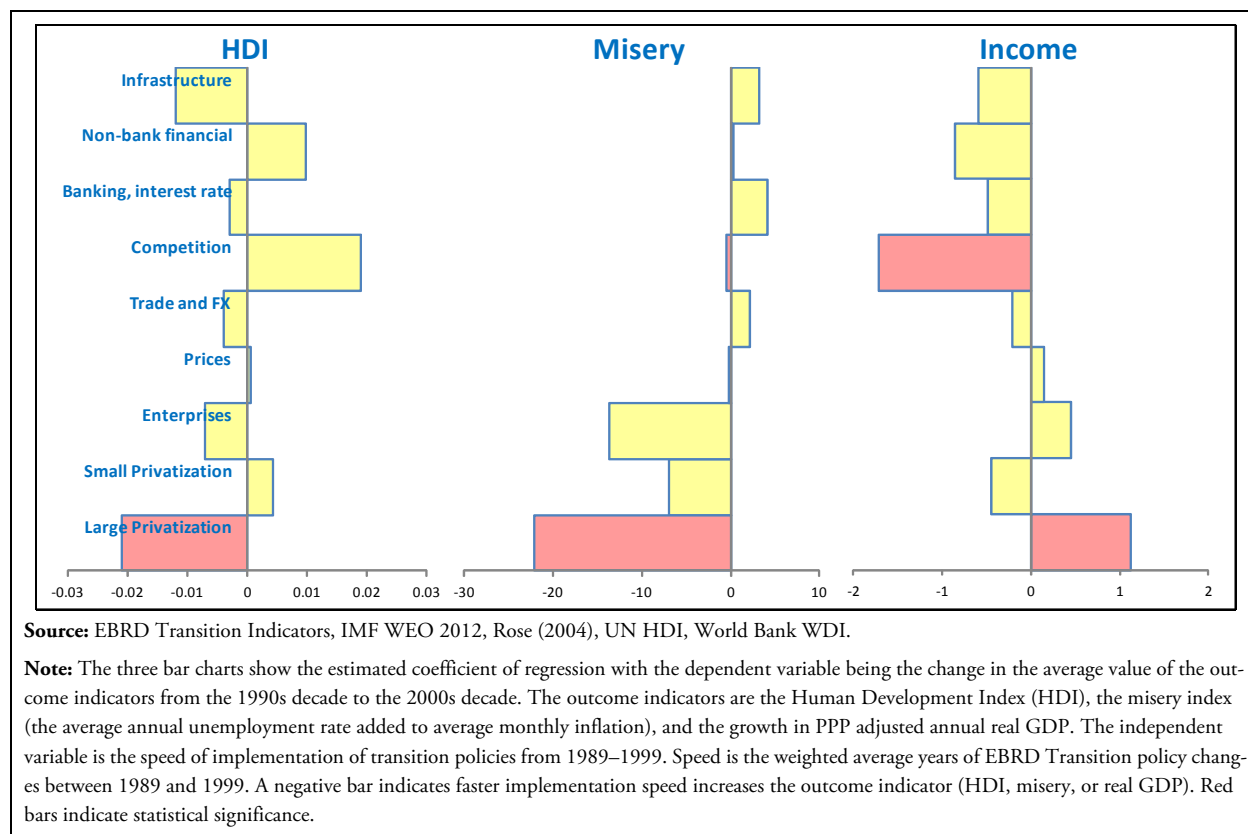2012, the World Development Indicators of the World Bank, and Rose (2004).

RESULTS

This section presents the regressions and the policy implications from the empirical evidence found. Table 2 shows the regression results divided into three panels for income growth, misery index and the HDI. In each panel, nine columns represent the estimates for the nine transition policy areas presented in Table 1. The bold row labeled "Transition control" shows the estimate α_3 from of equation 2 for 1989–2010; it is the estimated impact of an increase in the transition indicator on real PPP per-capita GDP growth, the misery index or HDI. The regressions presented in Table 2 focus on the impact of the policy change, i.e., include only the transition indicator and not the speed or breadth measures. The second column, for example, shows the regression for Small privatization policies. Per Table 1, implementing transition policies in this area would imply no state ownership of small enterprises and the effective trad-

ability of land. According to the results in Table 2, delivering these policies statistically significantly improves real PPP GDP growth, lowers the misery index and improves the HDI for a transition economy. Other results of interest drawn from Table 2 include the consistently positive impact from highly educated migrants (which could more broadly reflect highly educated populations), and the impact of energy prices. The stabilizing role of EU accession is also found to have a strong effect in lower the misery index, while agriculture as a share of GDP has the opposite effect.

Figure 5 graphs the estimated coefficient, α_3 from of equation 2, for each of the three measures of well-being, with red bars indicating statistical significance. This presentation allows a first pass at comparing results across well-being indicators and transition policy areas, so as to see which are the most effective. The results suggest that Trade and Foreign Exchange Liberalization, Enterprise Reform, and Privatization of Small and Large Enterprises all simultaneously con-

Figure 6.   The Impact of the Speed of Transition Policies Implementation on Well-Being

Note: The three bar charts show the estimated coefficient of regression with the dependent variable being the change in the average value of the outcome indicators from the 1990s decade to the 2000s decade. The outcome indicators are the Human Development Index (HDI), the misery index (the average annual unemployment rate added to average monthly inflation), and the growth in PPP adjusted annual real GDP. The independent variable is the speed of implementation of transition policies from 1989–1999. Speed is the weighted average years of EBRD Transition policy changes between 1989 and 1999. A negative bar indicates faster implementation speed increases the outcome indicator (HDI, misery, or real GDP). Red bars indicate statistical significance.

tribute to growing income, lowering the misery index, and increasing the Human Development Index. Liberalizing Foreign Exchange and trade implies introducing currency convertibility, removing administrative controls on currency exchange markets and removing administrative barriers and tariffs on trade. Enterprise reform means eliminating soft budgets to public enterprises, modernizing management and making them viable to the point that private investors are willing to participate as investors. Large privatization means at least seventy-five percent of enterprise assets in private ownership with effective corporate governance. Price liberalization statistically significantly increases income but it also lowers the HDI and increases the misery index (though not statistically significantly for the latter). It implies removing all price controls except those typically kept (e.g. on housing). Hence, taken together, the results suggest that liberalizing trade and foreign exchange markets while privatizing small enterprises, large enterprises, and public enterprises help increase income, lower the misery index, and increase the HDI.

Price liberalization is found to increase income, but it lowers the HDI and increases misery index (though not statistically significantly for the latter).

Figure 6 shows the analogous results for a panel regression using the speed of policy implementation for each transition policy area. Note that the speed measure is larger as the policy is implemented more slowly. Hence, the evidence suggests that for large privatizations, a slower implementation increases income growth, lowers the misery index, but also lowers the HDI. For competition policy (effective enforcement of competition policy; unrestricted entry to most markets), slower policy implementation lowers income and slightly increases the misery index (small negative impact), and has a positive but statistically insignificant effect on HDI. As HDI data are very sparse and therefore less reliable, the thrust of the evidence would suggest slow implementation of large privatization and fast implementation of competition policy reforms.

Figure 7.   The Impact of Breadth of Transition Policies Implementation on Well-Being

Source: EBRD Transition Indicators, IMF WEO 2012, Rose (2004), UN HDI, World Bank WDI.

Note: The three bar charts show the estimated coefficient of regression with the dependent variable being the change in the average value of the outcome indicators from the 1990s decade to the 2000s decade. The outcome indicators are the Human Development Index (HDI), the misery index (the average annual unemployment rate added to average monthly inflation), and the growth in PPP adjusted annual real GDP. The independent variable is the speed of implementation of transition policies from 1989–1999. A negative bar indicates that broader implementation decreases the outcome indicator (HDI, misery, or real GDP). Red bars indicate statistical significance.
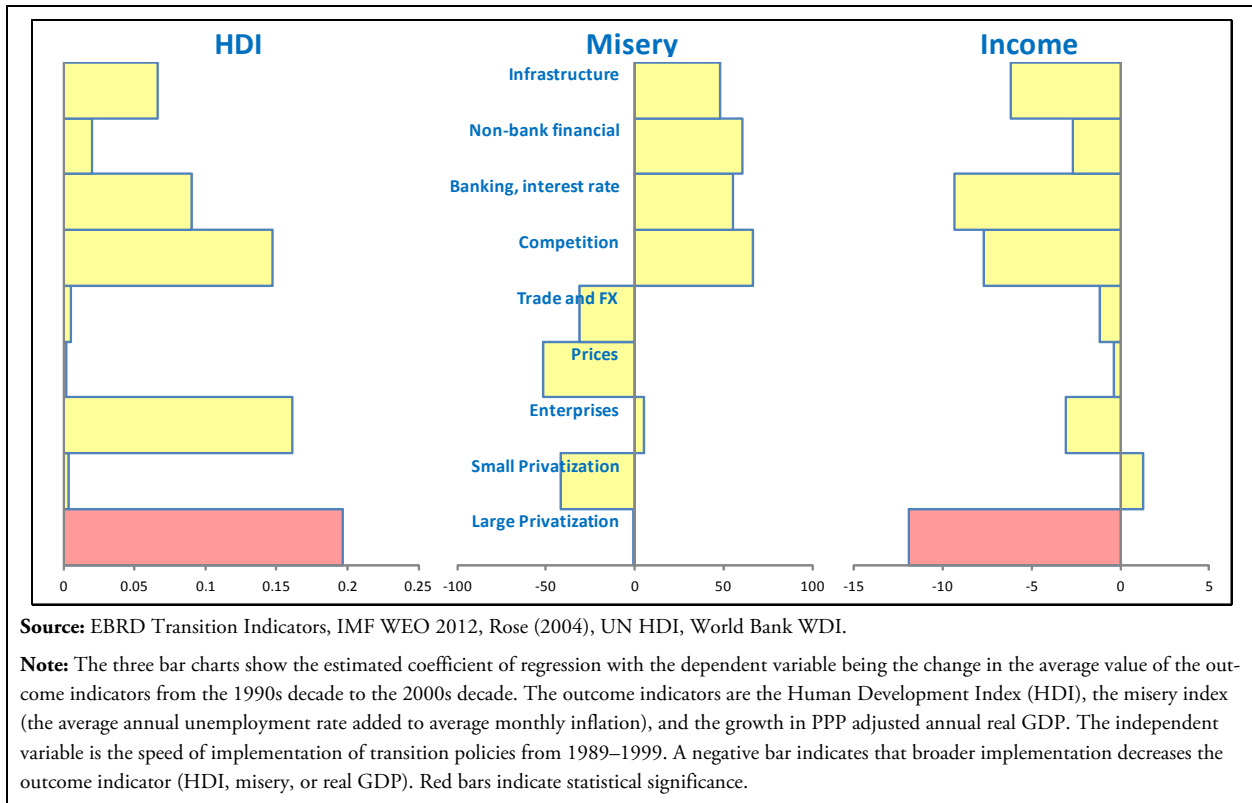
Figure 7 considers the breadth of policy reforms on the measures of wellbeing. Here, the results are less convincingly pointing in any direction. Most are insignificant, only large privatizations have a statistically significant impact, and that is to lower income while raising the HDI. Along with sparse data, as the breadth of implementation is essentially a percentage of accomplishment within the EBRD scale, non-linearities not captured in the transition indices (e.g. a change from 10 to 35 percent may not be the same as from 70 to 95 percent) may present insurmountable estimation challenges.

Table 3 attempts to address the difficulties in breadth and speed results by simply comparing the average breadth and speed of policy implementation for a group of "model" transition countries versus the breadth and speed scores for the rest of the transition economies. The model countries include Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia. The table compares the average of these countries to the rest of the countries in the sample, and highlights the statistically significant differences

in means across the two groups. The results are broadly consistent with the estimations above, suggesting that there are important differences in the speed of implementation. The model countries implemented transition policies more slowly in the areas of competition, securities and non-bank financial markets, infrastructure privatization and governance and public enterprises. They also implemented large industries privatizations faster, and implemented a broader reform, according to the breadth measure.

CONCLUSIONS

Any study attempting to disentangle and measure the impact of policies on long-term growth outcomes faces difficult endogeneity issues, namely, do successful countries result from good policies, or are good policies enacted only in countries that are successful for other reasons? Adding to this challenge are the data and measurement difficulties, not least of which is the fact that we have very few observed transitions to market economies, and the early years of these tend to have very poor economic data.

Table 3.   Comparing the Speed and Breadth of Reforms Across Country Groups

	Speed (weighted years)[a]		Breadth (pct in 1st 10 yrs)[b]		
	Model	Others	Model	Others	
1. Large scale privatization	4.46	6.00	0.83	0.62	Faster, Broader
2. Small scale privatization	4.92	5.13	0.61	0.76	…
3. Governance and enterprise restructuring	6.26	5.15	0.39	0.47	Slower
4. Price liberalization	3.78	4.34	0.77	0.78	…
5. Trade and foreign exchange system	5.66	6.06	0.80	0.83	..
6. Competition policy	5.55	4.65	0.40	0.45	Slower
7. Banking reform and interest rate liberalization	6.12	5.53	0.60	0.58	…
8. Securities markets and non-bank financial institutions	6.62	5.27	0.36	0.44	Slower
9. Infrastructure	7.48	6.26	0.41	0.47	Slower

Source: EBRD Transition Indicators.

Others: Albania Armenia Azerbaijan Belarus Bosnia & Herzegovina Bulgaria Croatia Georgia Kazakhstan Kyrgyzstan Macedonia Moldova Mongolia Montenegro Romania Russia Serbia Tajikistan Turkey Turkmenistan Ukraine Uzbekistan

Model: Estonia Hungary Latvia Lithuania Poland Slovakia Slovenia

a.   Measures the speed in years in which reforms were carried out, up to 1999.
b.   Measures the percentage of reforms (out of the total possible) that were done by 1999.

This study attempts to overcome these difficulties via alternative measures and by exploiting the relatively long time period that has passed since the start of the transition. Evidence is presented suggesting that liberalizing prices and trade and foreign exchange markets while privatizing small enterprises, large enterprises, and enterprises bring higher incomes, lower misery indices, and higher HDI levels. The data also suggest that large privatizations should proceed slowly while competition policy should proceed quickly. Finally, the study also suggests that China and Vietnam are not good comparators for Cuba. These two represent the successful development and industrialization of mainly agrarian societies in grinding poverty, which is not an appropriate starting point for modeling Cuba's potential future transition.

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