Online Appendix for *Dynamic Inputs and Resource (Mis)Allocation*

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This section gives additional tables and figures that provide the details behind comments made in footnotes and text. Some tables are also provided merely to give more detail to the interested reader. The majority of the appendix is devoted to robustness and further detail regarding the analysis of the World Bank data contained in Section 6.

Below, we list the figures and tables, with a brief description and a reference to the sections of the paper that they supplement.

- Table OA.1 gives the summary statistics for all data sets including the WBES data. It expands Table 2.
- Figure OA.1 shows simulation results for the standard deviation in the change in MRPK, using the same parameters used to create Figure 1 in the paper. This set of results are described to in Subsection 4.2.2 in discussing the results in Table 6.
- Table OA.2 shows the S^2 measure of fit for the model in capturing the standard deviation in the change in capital, for Tier 1 countries. This is described in footnote 36 of the paper.
- Table OA.3 shows the S^2 measure of fit for the model in capturing dispersion in MRPK, under alternative AR(1) specifications which include firm fixed effects. Including the fixed effects can change the estimates of ρ and σ in the AR(1) somewhat, and we show robustness to these alternate estimates. By Theorem 1, the model predictions, conditional on the ρ and σ, are unaffected by the inclusion of firm FE's. These results are described in footnote 30 of the paper.
- Table OA.4 reports the correlation coefficient between three alternate measures of TFPR volatility. These are: $\text{Std}_s[\omega_{it} - \omega_{it-1}]$, which we refer to in table OA.4 as 'vol'; an AR(1) measure which is the σ_s term in the following specification: $\omega_{it} = \mu_s + \rho_s \omega_{it-1} + \sigma_s \nu_{it}$; and, finally, an AR(1) specification in which we replace μ_s with a producer-level fixed effects. In Table OA.4 we refer to this last specification as 'AR(1)FE'. The AR(1) specifications impose the restriction that σ_s is constant over

time. To keep our alternative measures comparable, we impose the same restriction on our 'vol' measure.[1] As Table OA.4 shows, there is a high correlation among our various alternative approaches to inferring the volatility of the TFPR process. All correlation coefficients are greater than 0.72, and most are above 0.9. Thus, the shock processes are similar across different specifications, and thus our results are robust to alternate measures of volatility. This expands on the brief discussion in section 4 of the paper.

- Tables OA.7, OA.5 and OA.6 report the results of a barrage of robustness checks on the correlation between dispersion in MRPK and TFPR volatility reported in Table OA.16 in section 6 of the paper, using the World Bank data.

- Tables OA.8 and OA.9: In order to test whether our results from the World Bank data (WBES) could be plagued by remaining measurement error, we follow Hsieh and Klenow (2009) and relate our measure of productivity to decision variables that plausibly have little room for measurement error.

  Regardless of the ultimate hypothesized source of measurement error, if measured TFPR were mere measurement error, we would not expect actual behavior to be correlated with measured TFPR.[2]

  With this in mind, we ran a probit with an indicator for positive investment as the dependent variable, and TFPR, log capital and country fixed effects as the explanatory variables. See Table OA.8. The average marginal effect on TFPR was estimated to be 0.11 with a standard error of 0.01, making it significant at better than one percent. The pseudo-R-squared was 0.16.

  We also ran an OLS regression with the log investment to capital ratio as the dependent variable, and (again) TFPR, log capital and country fixed effects as the explanatory variables (using the World Bank data). See Table OA.9. The coefficient on productivity was 0.34, again significant at better than one percent. The R-squared was 0.12. We also ran the same regression with just log investment as the dependent variable, with no change in results.

  The indicator for positive investment is likely to be well measured and is positively, and significantly, correlated with productivity. The log investment to capital ratio, while arguably more prone to measurement error, displays the same pattern. This constitutes evidence that plausibly well-measured decision variables are correlated with productivity.

[1] As a consequence, the results in Table 3 (at the country-industry-year level) differ in magnitude from those presented in Table 4 (at the country-industry level) .

[2] A plausible specification for measurement error would be to add an i.i.d. shock to measured TFPR of the form: $\omega_{it}^{*} = \omega_{it} + \epsilon_{it}$. Notice that for the issue of dynamic inputs, it is irrelevant if these i.i.d. shocks ϵ_{it} are measurement error, or real shocks that are revealed after a firm has chosen inputs. In either case, ϵ_{it} will not be part of the firm's state variables when making investment decisions. Thus it will be difficult to separate transitory shocks to TFPR from i.i.d. measurement error, as these generate identical behavior (with the exception that true shocks have an impact on profits, since they enter in a non-linear way). Clearly, the dispersion of marginal products generated by these error shocks is irrelevant for welfare.

- Tables OA.10 and OA.11 report the AR(1) estimates that are used in Section 6.3 to computed the model predictions for the WBES sample. Specification (5) in Table OA.10 (equiv. Table OA.11) are the primary estimates of interest.

- Table OA.12 reports the country specific production coefficients for the WBES sample.

- Table OA.13 presents regressions of our estimates of the volatility of TFPR on measures of the ease of enforcing contracts, political stability, and natural disasters. This forms the basis for the discussion in section 6.4 . More information on the construction of these variables is provided in Section 0.1 of the Appendix. Section 0.1, below, describes the data in detail.

- Table OA.14 presents the estimated persistence parameters of MRPK by country for the Tier 1 data. We run $\text{MRPK}_{it} = \mu + \rho\text{MRPK}_{it-1} + \nu_{it}$ by country, and include year and industry fixed effects. The standard errors are clustered at the firm/plant-level to account for serial correlation and heteroskedasticity. All estimates of ρ are significant at the 1 percent level.

- Table OA.15 revisits Table 3 of the main text for the US data, but we now only consider industry-level variation. This linear regression is in fact the line-of-best-fit inserted in Figure 2.

- Table OA.16 presents the relationship between static misallocation and volatility for the World Bank Data. Column I is the linear regression used to generate the line-of-best-fit inserted in Figure 4B.

0.1 Measures of Countries Economic Environment

In this section we provide additional detail on the measures discussed in section 6.4.

Cost of Contract Enforcement and Time to Enforce Contract: The World Bank Doing Business Survey (WBDBS)[3] measures the cost of enforcement of contracts as a percentage of a claim. The data for the survey were collected yearly from 2004 to 2012, and we use the survey responses for 2012. From the documentation, the enforcement cost is measured in the following way:

> *Enforcement of contracts: cost as % of claim: Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita. No bribes are recorded. Three types of costs are recorded: court costs, enforcement costs and average attorney fees. Court costs include all court costs that Seller (plaintiff) must advance to the court, regardless of the final cost to Seller. Enforcement costs are all costs that Seller (plaintiff) must advance to enforce the judgment through a public sale of Buyer's movable assets, regardless of the final cost to Seller. Average attorney fees are the fees that Seller (plaintiff) must advance to a local attorney to represent Seller in the standardized case.*

The WBDBS measures the time to enforce a contract as:

> *Time is recorded in calendar days, counted from the moment the plaintiff decides to file the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between. The average duration of different stages of dispute resolution is recorded: the completion of service of process (time to file and serve the case), the issuance of judgment (time for the trial and obtaining the judgment) and the moment of payment (time for enforcement of the judgment).*

Political Stability Index: We rely on the Economists Intelligence Unit's measure of political stability. It is an index meant to capture the extent to which a country is in a state of political unrest. These data attempt to measure unrest over the period 2009-2010. See `http://viewswire.eiu.com/site_info.asp?info_name=social_unrest_table&page=noads` for more details on the methodology and data. The data were downloaded on April 25, 2013.

Natural Disaster Index: The data on disasters comes from the EM-DAT The International Disaster Database (at `http://www.emdat.be/` accessed on 5/13/2013) and counts the number of disasters (dating back to 1900) including natural, meteorological and climatological disasters and to obtain a meaningful measure we divide the number of disasters in recent years, the last decade (2002-2012) in particular, by the appropriate land area.

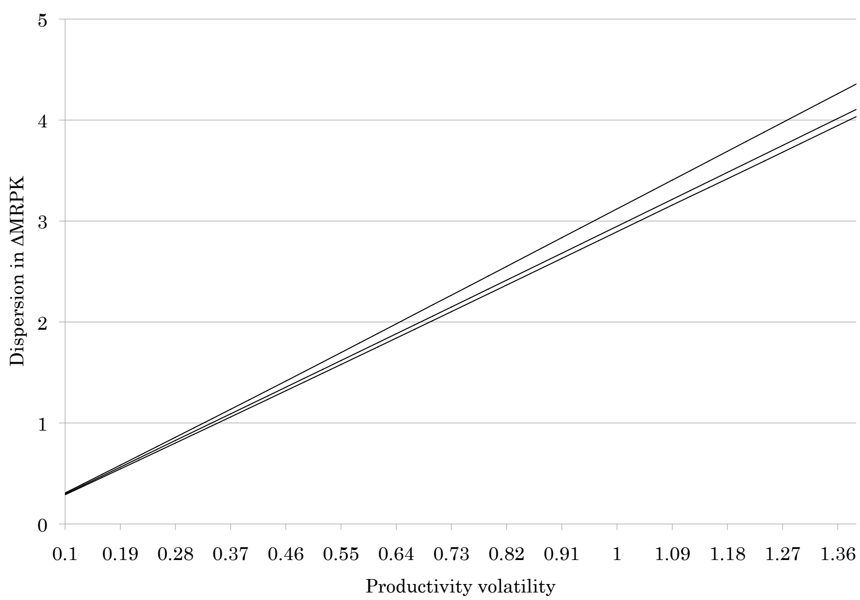
[3] The World Bank Doing Business Survey is at `http://www.doingbusiness.org/methodology/~/media/GIAWB/Doing\%20Business/Documents/Methodology/Supporting-Papers/DB-Methodology-Courts.pdf`. Accessed February 5, 2013.

Table OA.1: Summary Statistics Across All Datasets

	Medians			Standard Deviations			
Country	Workers	Δs	$\Delta\omega$	Disp MRPK	Disp. k	Disp. ω	Volatility
U.S. †	111	0.01	0.00	0.98	1.78	0.63	0.35
Chile	19	0.02	0.00	1.22	1.92	0.54	0.29
France	8	0.02	0.02	1.28	2.04	0.61	0.19
India	n.a.	0.06	0.04	1.13	1.61	0.67	0.29
Mexico	141	0.02	0.02	1.40	2.13	0.86	0.39
Romania	5	0.01	0.01	1.38	2.05	0.70	0.39
Slovenia	4	0.07	0.03	1.56	2.51	0.59	0.40
Spain	8	0.03	0.01	1.48	2.00	0.46	0.23
World Bank	55	0.08	0.02	1.10	2.10	0.80	0.40

Note: Dispersion MRPK is given by Std($MRPK_{it}$), and volatility is Std($\omega_{it} - \omega_{it-1}$) – i.e., we compute dispersion across the entire dataset. † Median computed for the U.S. Census data as the average of plants between the 48th and 52nd percentile.

Figure OA.1: Volatility and Change in MRPK: Model Simulations



Notes: Volatility is the σ_c term in the AR(1) process. Values used in this simulation are: $\epsilon = -4, \delta = 10\%, \beta = \frac{1}{1+0.065}, \beta_K = 0.12, \beta_M = 0.40, \beta_L = 0.23, C_K^F = 0.09, C_K^Q = 8.8, \lambda = 1, \mu = 0, \rho_c \in \{0.65, 0.85, 0.94\}, \sigma_C \in [0.1, 1.4]$. We use the means in the U.S. Census Data to get our β's and use estimates of adjustment costs for the United States discussed in Section 5.

Table OA.2: $\text{Std}_s(\Delta k)$, S^2 measures of model fit by specification

Country	Specification (1)	(2)	(3)	(4)	(5)
United States	0.769	0.921	0.921	0.836	-17.902
France	0.577	0.977	0.568	0.459	0.899
Chile	0.948	0.957	0.935	0.790	-7.113
India	0.825	0.908	0.8019	0.679	-5.239
Mexico	0.575	0.773	0.503	0.377	0.667
Romania	0.542	0.952	0.476	0.303	0.214
Slovenia	0.552	0.982	0.552	0.416	0.521
Spain	0.640	0.902	0.613	0.494	-0.051
All (ex U.S.)	0.599	0.919	0.566	0.432	0.067
All	0.619	0.919	0.608	0.480	-2.045

Note: The unit of observation is the country-industry. Specifications are: (1) All countries have the U.S.'s estimated adjustment costs and production coefficients equal to the U.S. averages across industries; (2) Industry-country specific production coefficients (except for Slovenia see section 3.2), country specific adjustment costs, industry-country specific AR(1); (3) as for (2), but with the U.S.'s estimated adjustment costs for all countries; (4) as for (3), but with twice the U.S.'s estimated adjustment costs for all countries; and, (5) as for (3), but with zero adjustment costs (other than the one period time-to-build) for all countries. In all specifications, the AR(1) is estimated using TFPR computed using the production coefficients used in the model specification.

Table OA.3: Dispersion in MRPK, S^2 measures of model fit by alternate AR(1) specification

Country	Specification			
	(1)	(2)	(3)	(4)
United States (OLS, FE)	0.850	0.856	0.748	0.816
United States (A-B)	0.485	0.569	0.754	0.759

Note: The unit of observation is the industry (the data are for the U.S. only). Specifications are: (1) All industries have the U.S.'s estimated adjustment costs (the estimates from the paper using the simple AR(1)) and production coefficients equal to the U.S. averages across industries; (2) As for (1) but with industry specific production coefficients; (3) as for (2), but with twice the U.S.'s estimated adjustment costs; and, (4) as for (3), but with zero adjustment costs (other than the one period time-to-build). (OLS, FE) refers to a specification in which the AR(1) is estimated with firm fixed effects. (A-B) refers to estimates adjusted according to the correction for the σ estimate suggested by Arellano and Bond (1992).

Table OA.4: Correlation among volatility measures

Country	vol, AR(1)	vol, AR(1)FE	AR(1), AR(1)FE
U.S.	0.82	0.80	0.93
Chile	0.97	0.84	0.76
France	0.99	0.96	0.97
India	0.98	0.73	0.78
Mexico	0.99	0.94	0.95
Romania	0.99	0.85	0.91
Slovenia	0.93	0.85	0.92
Spain	0.99	0.80	0.77

Note: We report the correlation coefficient between the various measures of volatility: our reduced form measure of volatility ($vol = \text{Std}_s[\omega_{it} - \omega_{it-1}]$), and those obtained from the structural process for TFPR using either an $AR(1)$, and an $AR(1)$ with producer fixed effects.

Table OA.5: Robustness of Main Results to Firm Size Threshold

	Employment $\geq$ 25	Employment $\geq$ 10
MRPK (All I)	0.31***	0.30***
	(0.09)	(0.14)
MRPK (All II)	0.30***	0.22***
	(0.10)	(0.09)
sd(Δ MRPK)	0.47***	0.44***
	(0.07)	(0.06)

Note: Given the heterogeneity in sampling frames across the countries we use, we investigate the extent to which Tier 1 results reported in Section 4 are sensitive to changing the sampling based on firm size. Table 6 presents regression coefficients from projecting various moments on TFPR volatility. We restrict our attention to firms with at least 25 (or 10) employees, to verify whether our results are subject to compositional differences of firm size across industries and countries. As can be seen, adopting alternative sampling based on size appears to have little qualitative impact on our results. We report the results of across all Tier 1 countries excluding the U.S. and India (which does not report employment). We omit the U.S. due to the census disclosure requirements. The results are robust for each country and for brevity we only report the cross country specifications. 'All I' refers to the unweighted regression, whereas 'All II" refers to a weighted regression with the weights the number of producers in a country-industry-year observation. These cross-country-industry-year regressions include year and country dummies, and report standard errors clustered at the country level.

Table OA.6: WBES Robustness Checks: Productivity Measurement

Dep. Var.: Dispersion of MRPK	Coeff. on Std.$(\omega_{it} - \omega_{it-1})$
Baseline	0.67**
	(0.21)
Firm-Level Input Shares	0.47*
	(0.23)
Less Elastic Demand ($\epsilon = 2$)	0.65**
	(0.18)
More Elastic Demand ($\epsilon = 6$)	0.69***
	(0.15)
Productivity Estimated via OLS	0.77***
(with industry-country fixed effects)	(0.13)
Drop top and bottom decile for each country	1.10***
	(0.22)
Interquartile Range	0.54**
	(0.16)

Note: All regressions share a common specification: $y_{it} = \text{constant} + \text{Std.}(\omega_{it} - \omega_{it-1})$. We use a weighted OLS with weights equal to the number of firms per country. 'Baseline' refers to specification I of panel A in Table OA.16. 'Firm-Level Input Shares' uses firm-level labor and material shares to compute firm-level production function coefficients β_{it}. 'Less and More Elastic' computes productivity assuming either $\epsilon = 2$ or $\epsilon = 6$ (the results in the Baseline specification assume $\epsilon = 4$). 'Productivity estimated via OLS' computes production function coefficients as the coefficients of an OLS regression of log sales on log labor, materials and capital. These coefficients are allowed to vary by country-industry pair, and include a country-industry specific intercept. 'Interquartile Range' computes the dependent variables as interquartile ranges rather than standard deviations.

Table OA.7: WBES Robustness Checks: Sample Composition

Dependent Variable: MRPK Dispersion					
	(1)	(2)	(3)	(4)	(5)
Standard Deviation of Change in TFPR	0.667***	0.436*	0.684***	0.180	0.497*
	(0.170)	(0.165)	(0.168)	(0.542)	(0.201)
Constant	0.781***	0.851***	0.769***	1.022***	0.833***
	(0.098)	(0.098)	(0.097)	(0.213)	(0.096)
All	X				
Manufacturing Only		X			
More than 10 workers			X		
More than 50 workers				X	
Factor Share for Materials and Labor in 10-90 percentile					X
r^2	0.33	0.21	0.39	0.01	0.22
F-stat	15.38	7.02	16.51	0.11	6.13
Countries	33	29	28	12	24
Firm-level Observations	5563	3872	4801	2909	3667

Note: Standard errors clustered by country. Factor Share for Materials and Labor drops firms whose factor shares for materials or labor are outside the 10-90th percentile across all firms in the WBES data.

Table OA.8: WBES, Positive Investment and TFPR

Dep. Var.: Positive Investment Indictator			
	(1)	(2)	(3)
TFPR	0.11***	0.05***	0.05***
	(0.01)	(0.01)	(0.01)
Log Capital		0.04***	0.04***
		(0.00)	(0.00)
Country FE		X	
Country-Industry FE			X
Firm-level Observations	5532	5532	5388
Countries	32	32	32

Note: Marginal Effects from a Probit are reported. Fixed-effects implemented by estimating country dummies, and country-industry dummies. Results from a conditional logit produce similar coefficients. The number of countries is 32, due to the fact that the Peruvian data in the WBES reports zero investment for all firms.

Table OA.9: WBES, Investment and TFPR

Dep. Var.:	Log Investment to Capital Ratio		Log Investment	
	(1)	(2)	(3)	(4)
TFPR	0.34***	0.24**	0.34***	0.24**
	(0.09)	(0.07)	(0.09)	(0.07)
Log Capital	-0.30***	-0.33***	0.70***	0.67***
	(0.04)	(0.03)	(0.04)	(0.03)
Country-Industry FE		X		X
Firm-level Observations	2740	2740	2740	2740
Country	32	32	32	32
R-Squared	.12	.19	.62	.65

Note: The number of countries is 32, due to the fact that the Peruvian data in the WBES reports zero investment for all firms. Firms with zero investment are not included.

Table OA.10: Time series process, AR(1), for productivity: Using the World Bank data

Dependent Var: Productivity ω_{it}	(1)	(2)	(3)	(4)	(5)
ω_{it-1}	0.88***	0.92***	0.79**	0.91***	0.91***
	(0.05)	(0.12)	(0.30)	(0.04)	(0.04)
$(\omega_{it-1}) \bullet$(Country Dummy)				X	X
Var.				0.07	0.16
ω^2_{it-1}		0.13*	0.15		
		(0.06)	(0.14)		
ω^3_{it-1}		-0.04**	-0.03		
		(0.01)	(0.03)		
ω^4_{it-1}		0.00**	0.00		
		(0.00)	(0.00)		
Constant	0.33*	0.01	0.09	0.22	0.49
	(0.15)	(0.11)	(0.24)	(0.11)	
Country Specific Constant					X
Var.					0.06
Variance σ					
Constant	0.56***	0.43***	0.56***	0.56***	0.45
	(0.06)	(0.04)	(0.00)	(0.00)	
Country Specific Variance			X	X	X
Var.			.23	.24	.23
Log Assets		0.02*			
		(0.01)			
Observations	5563	5563	5563	5563	5274
Countries	33	33	33	33	33
Log-Likelihood	-4636	-4366	-3355	-3352	-3352

Note: Productivity is measured using gross output. Standard Errors (in parentheses) clustered by country. 'Var.' indicates the standard deviation of the set of parameters indicated in the row above. For specification (5), averages from country-level regressions are presented. The full set of coefficients and standard errors, together with those estimated using the other data sets, are presented in Table OA.11.

Table OA.11: Country-specific AR(1) coefficients: Using the World Bank Data

Specification: $\omega_{it} = \mu_c + \rho_c \omega_{it-1} + \sigma_c \eta_{it}$

Country	ρ_c	se(ρ_c)	σ_c	se(σ_c)	μ_c	se(μ_c)
Bangladesh	0.92	0.08	0.56	0.03	0.19	0.23
Benin	0.80	0.05	0.36	0.03	0.54	0.12
Brazil	0.94	0.04	0.26	0.02	0.26	0.12
Chile	0.68	0.02	0.70	0.02	1.08	0.07
Costa Rica	0.85	0.03	0.48	0.02	-0.09	0.03
Ecuador	0.99	0.07	0.44	0.03	0.02	0.19
El Salvador	0.86	0.03	0.36	0.02	0.14	0.05
Ethiopia	0.84	0.04	0.55	0.03	0.36	0.09
Guatemala	0.30	0.04	0.60	0.03	1.81	0.12
Guyana	1.05	0.10	0.69	0.09	-0.06	0.50
Honduras	0.71	0.03	0.50	0.02	0.66	0.10
Indonesia	0.74	0.03	0.90	0.03	0.81	0.11
Kyrgyzstan	1.00	0.03	0.11	0.01	0.01	0.05
Lithuania	0.81	0.06	0.37	0.03	0.58	0.16
Madagascar	0.79	0.06	0.44	0.03	0.66	0.20
Malawi	0.92	0.04	0.37	0.02	0.29	0.12
Mauritius	0.61	0.13	1.04	0.10	1.08	0.41
Moldova	0.94	0.03	0.14	0.01	0.14	0.08
Morocco	0.56	0.03	0.47	0.02	1.34	0.10
Nicaragua	0.76	0.03	0.38	0.02	0.54	0.08
Peru	0.98	0.04	0.20	0.03	0.11	0.12
Philippines	1.01	0.01	0.18	0.01	-0.01	0.03
Poland	1.03	0.04	0.12	0.01	-0.05	0.10
South Africa	0.95	0.03	0.24	0.01	0.28	0.10
Sri Lanka	0.85	0.03	0.38	0.03	0.41	0.10
Syria	0.92	0.10	0.49	0.05	0.12	0.21
Tajikistan	1.03	0.04	0.14	0.01	-0.13	0.08
Tanzania	1.00	0.06	0.38	0.04	0.06	0.16
Thailand	0.84	0.02	0.24	0.01	0.57	0.08
Turkey	0.93	0.05	0.40	0.05	0.27	0.16
Uzbekistan	0.97	0.07	0.33	0.02	-0.04	0.13
Vietnam	0.84	0.03	0.39	0.01	0.50	0.08
Zambia	0.68	0.05	0.33	0.02	0.89	0.12

Note: the μ coefficients will not be comparable across data sets due to the use of different measurement units.

Table OA.12: WBES Production function coefficients: Mean estimates by country

	Labor Coefficient β_l	Material Coefficient β_m	Capital Coefficient β_k
Bangladesh	0.14	0.50	0.11
Benin	0.17	0.48	0.10
Brazil	0.17	0.48	0.11
Chile	0.15	0.44	0.16
Costa Rica	0.17	0.47	0.12
Ecuador	0.15	0.48	0.12
El Salvador	0.15	0.48	0.12
Ethiopia	0.18	0.46	0.11
Guatemala	0.17	0.47	0.11
Guyana	0.12	0.50	0.13
Honduras	0.16	0.47	0.12
Indonesia	0.15	0.48	0.12
Kyrgyzstan	0.16	0.47	0.12
Lithuania	0.17	0.44	0.14
Madagascar	0.17	0.46	0.12
Malawi	0.14	0.48	0.12
Mauritius	0.14	0.48	0.12
Moldova	0.16	0.47	0.12
Morocco	0.16	0.48	0.11
Nicaragua	0.16	0.47	0.11
Peru	0.17	0.47	0.11
Philippines	0.14	0.49	0.12
Poland	0.15	0.48	0.12
South Africa	0.16	0.47	0.12
Sri Lanka	0.15	0.48	0.11
Syria	0.16	0.48	0.11
Tajikistan	0.17	0.47	0.11
Tanzania	0.14	0.49	0.11
Thailand	0.15	0.49	0.11
Turkey	0.13	0.49	0.13
Uzbekistan	0.16	0.48	0.12
Vietnam	0.16	0.47	0.12
Zambia	0.13	0.50	0.12

Table OA.13: Correlates of Volatility; Std.$[\omega_{it} - \omega_{it-1}]$

Dependent Var:	TFPR Volatility (Std.$[\omega_{it} - \omega_{it-1}]$)			
	(1)	(2)	(3)	(4)
Cost of Contract Enforcement	0.003*			0.003**
	(0.001)			(0.001)
Time to Enforce Contract	0.000			0.000
	(0.000)			(0.000)
Political Stability Index		-0.030		-0.036
		(0.024)		(0.026)
Natural Disaster Index			0.157*	0.082
			(0.093)	(0.108)
Constant	0.276**	0.607**	0.385**	0.459**
	(0.086)	(0.149)	(0.042)	(0.160)
R-squared	0.074	0.016	0.054	0.143
F-Stat	2.285	1.525	2.843	2.337
Countries	33	33	33	33

Note: The unit of observation is the country. The specification is an OLS regression. The F-statistic tests for joint significance of all explanatory variables. * $p < 0.10$, ** $p < 0.05$. Cost of Contract Enforcement: Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita from the World Bank Doing Business Survey. Time to Enforce Contract: calendar days to enforce a contract, counted from the moment the plaintiff decides to file the lawsuit in court until payment, again from the World Bank Doing Business Survey. Political Stability Index: Economists Intelligence Units measure of political stability and unrest. Natural Disaster Index: count of the number of disasters including natural, meteorological and climatological disasters, from the International Disaster Database. To obtain a meaningful measure we divide the number of disasters by land area.

Table OA.14: Additional Predictions: Mean Reversion MRPK

Country	ρ
US	0.83
	(0.00)
Slovenia	0.80*
	(0.01)
India	0.83*
	(0.01)
Chile	0.90*
	(0.01)
Mexico	0.87*
	(0.01)
France	0.88*
	(0.00)
Romania	0.73*
	(0.00)
Spain	0.88*
	(0.00)

Note: We run $(s_{it} - k_{it}) = \mu + \rho(s_{it-1} - k_{it-1}) + \nu_{it}$ by country, and include year and industry fixed effects. The standard errors are clustered at the firm/plant-level to account for serially correlation and heteroskedasticity. Star denotes significant at the 1 percent level.

Table OA.15: Dispersion MRPK and volatility: US Industry-level variation

Country	Coefficient	R^2	Industry Obs.
U.S. [Plants]	0.73***	0.3	188
	(0.08)		

Note: We report the coefficient of a regression of $\text{Std}_s\,(MRPK)$ against volatility, defined as $\text{Std}_s(\omega_{it} - \omega_{it-1})$. *,**, and *** denote significance at the 10%, 5% and 1% levels respectively.

Table OA.16: Static misallocation and volatility:
Using the World Bank data (33 countries)

Panel A: Country-level analysis				
Specification	I	II (unweighted)	III	IV
Dependent Var:	Standard Deviation of $MRPK$, by country			
Std.$[\omega_{it} - \omega_{it-1}]$	0.67***	0.75**	0.64***	0.63***
	(0.21)	(0.28)	(0.22)	(0.21)
Log Assets $(t-1)$				0.00
				(0.01)
Industry FE			X	X
Constant	0.78***	0.79***	0.79***	0.77***
	(0.10)	(0.12)	(0.10)	(0.10)
R^2	0.31	0.22	0.36	0.36

Panel B: Country-Industry-level analysis			
Specification	V	VI	VII
Dependent Var:	Standard Deviation of $MRPK$, by country-industry		
Std.$[\omega_{it} - \omega_{it-1}]$	0.43***	0.42***	0.28**
	(0.08)	(0.08)	(0.10)
Incl. k_{it} & ω_{it}		X	
Industry & Country FE's			X
Industry-Countries	249	249	249
R^2	0.12	0.12	0.53

Note: Panel A: Column I and II run regressions on country-level aggregates. Column I runs a weighted OLS with weights equal to the number of firms per country, whereas Column II has equal weights for each country. Columns III and IV run regressions at the firm level (where the dependent variable and Std.$[\omega_{it} - \omega_{it-1}]$ only vary at the country level). The standard errors are clustered at the country level. Panel B: The dispersion in MRPK is computed by industry-country. Standard errors are clustered by industry-country.

References

Hsieh, Chang-Tai and Peter J. Klenow. 2009. "Misallocation and Manufacturing TFP in China and India." *Quarterly Journal of Economics* 124 (4):1403–1448.