

Table 1

An Example of ADF Tests on $\log(\text{GNP}) [q_t]$, First Differences of \log of GNP $[\Delta q_t]$ and growth rates $[h_t=(Q_t-Q_{t-1})/Q_{t-1}]^*$

(a) Constant included; 1500 Obs.; Critical values: 5%=-2.864, 1%=-3.438;

Variable	Lag	ADF t-Test	σ	t Lag	t-Probability
Log of GNP q_t	5	0.1169	0.072001	1.3317	0.1832
	4	0.14585	0.072021	2.8253	0.0048
	3	0.20439	0.072199	1.1937	0.2328
	2	0.22725	0.07221	-1.2462	0.2129
	1	0.20157	0.072225	0.49482	0.6208
	0	0.21226	0.072205		
First Diff. Δq_t	5	-13.397**	0.071939	-1.707	0.088
	4	-15.086**	0.071988	-1.2748	0.2026
	3	-17.190**	0.072004	-2.7825	0.0055
	2	-21.328**	0.072176	-1.1552	0.2482
	1	-27.255**	0.072185	1.2672	0.2053
	0	-37.052**	0.072201		
Growth Rates h_t	5	-15.046**	0.010963	-2.7796	0.0055
	4	-17.329**	0.010989	1.1188	0.2634
	3	-18.595**	0.01099	-0.81087	0.4176
	2	-21.829**	0.010989	-4.8012	0
	1	-32.801**	0.011075	7.3257	0
	0	-38.851**	0.01128		

(b) Constant and Trend included; 1500 Obs., Critical values: 5%=-3.415; 1%=-3.97;

Variable	Lag	ADF t-Test	σ	t Lag	t-Probability
Log of GNP Q_t	5	-2.4513	0.071869	1.4905	0.1363
	4	-2.3567	0.0719	2.9716	0.003
	3	-2.1664	0.0721	1.3261	0.185
	2	-2.0876	0.072119	-1.1085	0.2678
	1	-2.1655	0.072125	0.6366	0.5245
	0	-2.1283	0.07211		
First Diff. Δq_t	5	-13.398**	0.071961	-1.7014	0.0891
	4	-15.086**	0.07201	-1.2704	0.2042
	3	-17.190**	0.072025	-2.7771	0.0056
	2	-21.326**	0.072197	-1.1506	0.2501
	1	-27.251**	0.072206	1.2718	0.2036
	0	-37.044**	0.072221		
Growth Rates h_t	5	-15.313**	0.010939	-2.6601	0.0079
	4	-17.595**	0.010962	1.2743	0.2028
	3	-18.837**	0.010965	-0.6385	0.5233
	2	-22.057**	0.010963	-4.5807	0
	1	-33.052**	0.01104	7.5376	0
	0	-39.016**	0.011257		

* Econometric analyses refer to: $N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\varphi=0.5$.

Table 2.
Mean and St. Dev. of MonteCarlo Distributions of some Descriptive Statistics
of the time-series of GNP Growth Rates within a simulation in Four Paradigmatic Cases
(Par. Values other than reported: N=100, $\alpha=1.4$, $\varepsilon=0.1$, M=10000, T=1000)

Statistics	No Growth ($\lambda=1$, $\pi=0.1$, $\rho=10$, $\varphi=0.05$)		Mild Growth ($\lambda=1$, $\pi=0.1$, $\rho=0.1$, $\varphi=0.2$)	
	MC Mean	MC St.Dev.	MC Mean	MC St.Dev.
Mean	0.0001	0.0001	0.0006	0.0002
Min	-0.0693	0.0122	-0.0780	0.0187
Max	0.0779	0.0151	0.0787	0.0184
Median	-0.0002	0.0004	0.0002	0.0002
Std. Dev.	0.0176	0.0013	0.0158	0.0011
Skewness	0.1288	0.1335	0.1753	0.2922
Excess Kurtosis	1.1852	0.4798	3.3366	0.9634
Normality Test (Asympt. $\chi^2(2)$)	73.7285	55.1839	521.3644	266.7910

Statistics	Self Sust. Growth – Low Opp. ($\lambda=1$, $\pi=0.1$, $\rho=0.01$, $\varphi=0.5$)		Self Sust. Growth – High Opp. ($\lambda=5$, $\pi=0.4$, $\rho=0.01$, $\varphi=0.5$)	
	MC Mean	MC St.Dev.	MC Mean	MC St.Dev.
Mean	0.0017	0.0002	0.0024	0.0006
Min	-0.1337	0.0369	-0.0937	0.0306
Max	0.1376	0.0566	0.1898	0.7617
Median	0.0006	0.0002	0.0011	0.0002
Std. Dev.	0.0150	0.0024	0.0133	0.0234
Skewness	0.2663	1.0888	1.2444	2.2540
Excess Kurtosis	22.9359	8.0473	27.5730	10.1679
Normality Test (Asympt. $\chi^2(2)$)	24797.7853	18106.9480	37038.9900	25901.6756

Table 3.

Generalized Q-Statistics Tests for the difference between
Empiric and Simulated Autocorrelation Function of GNP Growth Rates Time-Series

(Autocorrelation Function truncated at lag=50; Chi-Squared (50) 1-Tail p-value in Brackets;
Par. Values other than reported: N=100, $\alpha=1.4$, $\varepsilon=0.1$, M=10000, T=1000)

(a) Global Information ($\rho=0$) and High Path-Dependency ($\phi=0.5$)

Q-Statistics	Countries	$\lambda=1$		$\lambda=3$		$\lambda=5$	
$\pi=0.1$	Canada	68.210	(0.044)	83.514	(0.002)	88.380	(0.001)
	France	61.205	(0.133)	88.642	(0.001)	99.543	(0.000)
	Germany	66.821	(0.056)	86.486	(0.001)	95.993	(0.000)
	Italy	30.855	(0.985)	40.427	(0.831)	45.933	(0.637)
	Japan	126.859	(0.000)	91.375	(0.000)	78.220	(0.007)
	U.K.	51.482	(0.416)	72.968	(0.019)	78.580	(0.006)
	U.S.	47.711	(0.566)	51.142	(0.429)	49.676	(0.486)
$\pi=0.4$	Canada	62.700	(0.107)	81.200	(0.003)	81.564	(0.003)
	France	47.833	(0.561)	67.575	(0.049)	85.167	(0.001)
	Germany	59.901	(0.159)	89.579	(0.000)	83.191	(0.002)
	Italy	32.883	(0.971)	44.959	(0.675)	44.713	(0.685)
	Japan	109.063	(0.000)	95.022	(0.000)	69.196	(0.037)
	U.K.	40.957	(0.815)	61.034	(0.136)	64.503	(0.081)
	U.S.	56.004	(0.260)	61.191	(0.133)	60.492	(0.147)

(b) Local Information ($\rho=0.1$) and Low Path-Dependency ($\phi=0.2$)

Q-Statistics	Countries	$\lambda=1$		$\lambda=3$		$\lambda=5$	
$\pi=0.1$	Canada	48.601	(0.530)	56.358	(0.249)	69.081	(0.038)
	France	49.536	(0.492)	59.739	(0.163)	71.115	(0.026)
	Germany	46.253	(0.625)	54.657	(0.302)	72.485	(0.020)
	Italy	27.176	(0.997)	34.124	(0.958)	42.241	(0.774)
	Japan	137.011	(0.000)	107.202	(0.000)	90.931	(0.000)
	U.K.	31.910	(0.978)	41.398	(0.802)	50.592	(0.450)
	U.S.	66.389	(0.060)	66.391	(0.060)	64.831	(0.077)
$\pi=0.4$	Canada	46.520	(0.614)	59.066	(0.178)	67.822	(0.047)
	France	36.744	(0.919)	48.673	(0.527)	55.436	(0.277)
	Germany	39.311	(0.862)	51.087	(0.431)	61.182	(0.134)
	Italy	30.517	(0.987)	37.307	(0.908)	48.554	(0.532)
	Japan	103.347	(0.000)	93.707	(0.000)	90.733	(0.000)
	U.K.	28.779	(0.993)	36.614	(0.921)	46.344	(0.621)
	U.S.	70.240	(0.031)	68.197	(0.044)	78.962	(0.006)

Table 4.

MonteCarlo Estimates of Persistence in GNP growth. Campbell and Mankiw (1989) Statistics

(See Appendix 4 for Details. Par. Values other than reported: N=100, $\alpha=1.4$, $\varepsilon=0.1$, M=10000, T=500)(a) Global Information ($\rho=0$) and High Path-Dependency ($\phi=0.5$) *

		$\lambda=1$		$\lambda=3$		$\lambda=5$	
	K	Bias Corrected \hat{V}^k	Bias Corrected $\hat{A}^k(1)$	Bias Corrected \hat{V}^k	Bias Corrected $\hat{A}^k(1)$	Bias Corrected \hat{V}^k	Bias Corrected $\hat{A}^k(1)$
$\pi=0.1$	10	1.716 (0.294)	1.319	2.157 (0.294)	1.508	2.479 (0.425)	1.645
	20	1.637 (0.387)	1.288	1.949 (0.461)	1.433	2.300 (0.544)	1.584
	30	1.449 (0.417)	1.212	1.745 (0.502)	1.356	2.141 (0.616)	1.528
	40	1.324 (0.438)	1.159	1.625 (0.537)	1.309	2.044 (0.676)	1.493
	50	1.262 (0.465)	1.131	1.539 (0.567)	1.274	1.959 (0.722)	1.462
$\pi=0.4$	10	1.585 (0.271)	1.263	1.987 (0.340)	1.430	2.285 (0.391)	1.548
	20	1.526 (0.361)	1.239	1.776 (0.420)	1.352	2.141 (0.507)	1.498
	30	1.371 (0.394)	1.174	1.616 (0.465)	1.289	2.072 (0.596)	1.474
	40	1.277 (0.422)	1.133	1.532 (0.507)	1.256	2.009 (0.664)	1.452
	50	1.226 (0.452)	1.111	1.467 (0.541)	1.229	1.941 (0.716)	1.427

* Estimated MC Standard Deviations in Parentheses. Cf. Appendix 4 for Details

(b) Local Information ($\rho=0.1$) and Low Path-Dependency ($\phi=0.2$) *

		$\lambda=1$		$\lambda=3$		$\lambda=5$	
	k	Bias Corrected \hat{V}^k	Bias Corrected $\hat{A}^k(1)$	Bias Corrected \hat{V}^k	Bias Corrected $\hat{A}^k(1)$	Bias Corrected \hat{V}^k	Bias Corrected $\hat{A}^k(1)$
$\pi=0.1$	10	1.149 (0.197)	1.072	1.390 (0.238)	1.180	1.623 (0.278)	1.279
	20	1.198 (0.284)	1.095	1.451 (0.343)	1.206	1.641 (0.388)	1.286
	30	1.183 (0.340)	1.088	1.387 (0.399)	1.179	1.531 (0.440)	1.242
	40	1.155 (0.382)	1.075	1.323 (0.437)	1.151	1.452 (0.480)	1.209
	50	1.135 (0.419)	1.065	1.287 (0.475)	1.136	1.410 (0.520)	1.192
$\pi=0.4$	10	1.096 (0.188)	1.047	1.334 (0.228)	1.155	1.513 (0.259)	1.232
	20	1.171 (0.277)	1.082	1.422 (0.336)	1.193	1.560 (0.369)	1.251
	30	1.195 (0.344)	1.093	1.383 (0.398)	1.176	1.478 (0.425)	1.217
	40	1.200 (0.397)	1.095	1.337 (0.442)	1.157	1.427 (0.472)	1.196
	50	1.203 (0.443)	1.097	1.385 (0.485)	1.147	1.409 (0.520)	1.189

* Estimated Montecarlo Standard Deviations in Parentheses. Cf. Appendix 4 for Details

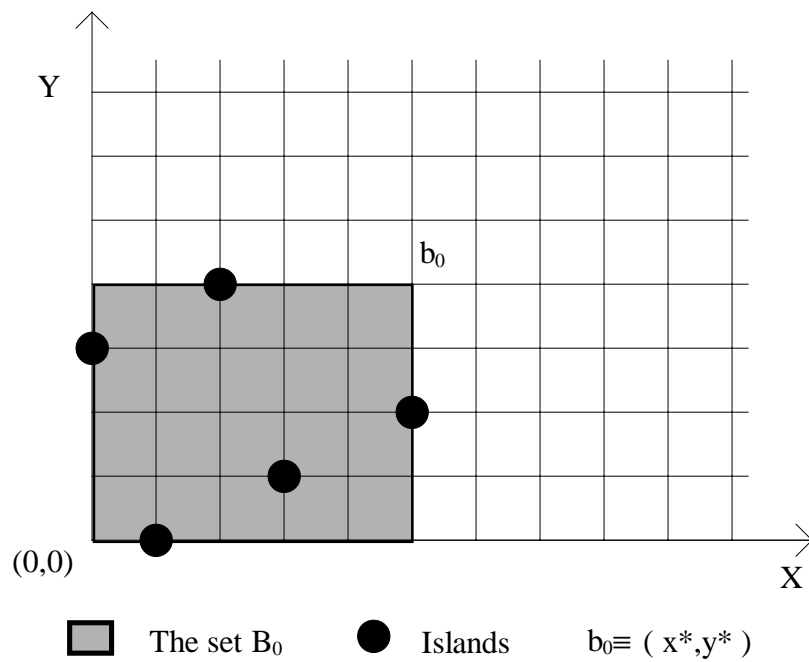


Figure 1.
A simple example of initial distribution of islands ($\ell_0=5$)

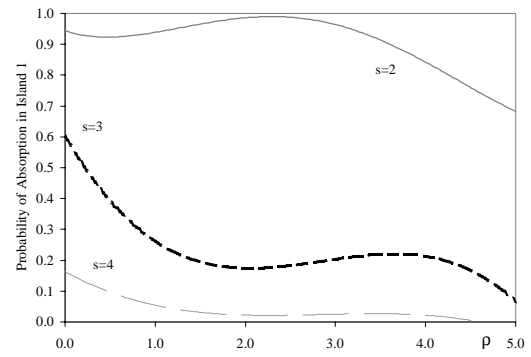
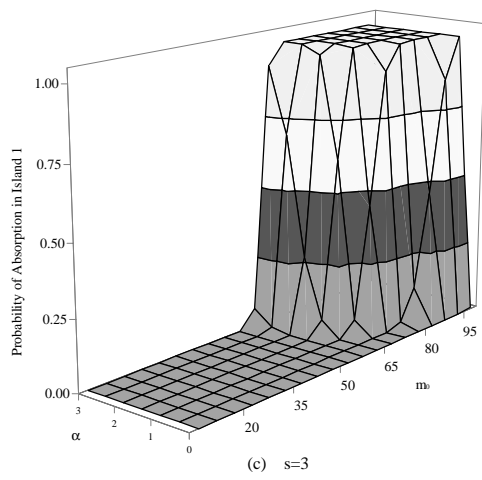
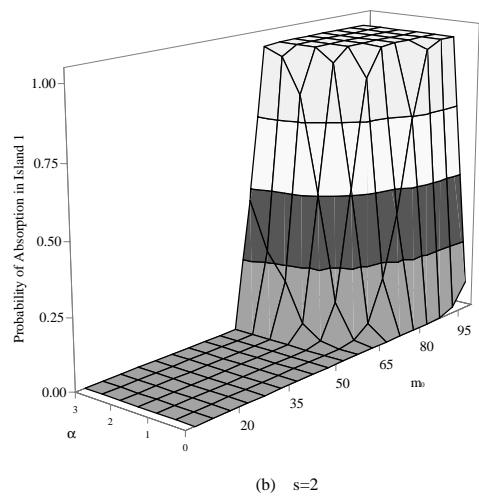
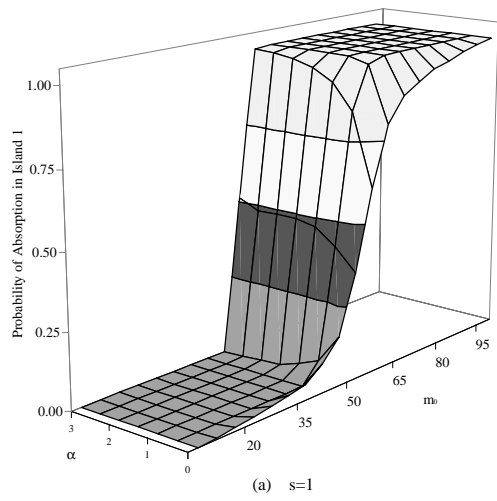


Figure 2.

No-Exploration Model: Probability of Absorption in Island 1 as a Function of s [Productivity Coefficient of Island 2], α [Returns to Scale], m_0 [Initial Number of Miners on Island 1] and ρ [Speed of Information Diffusion]

Graphs (b) and (c) are drawn for $\rho=0.1$; All results refer to $N=100$ and $M=10000$

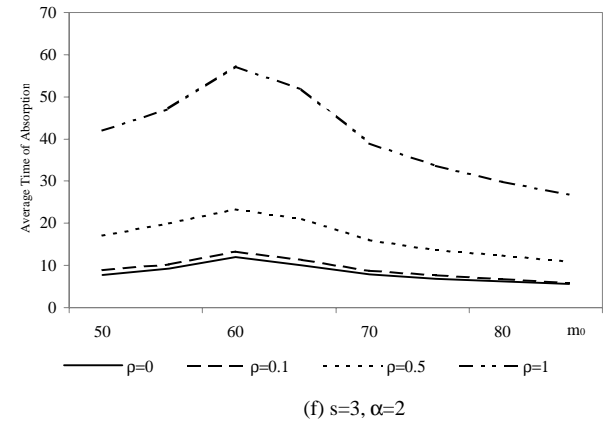
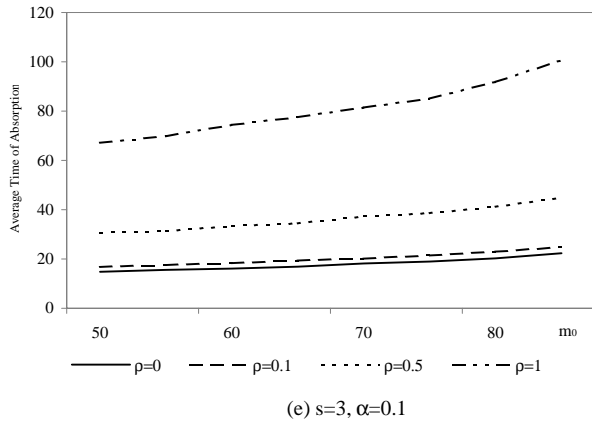
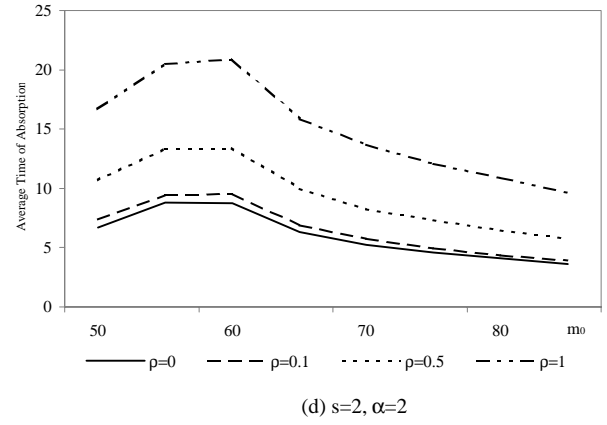
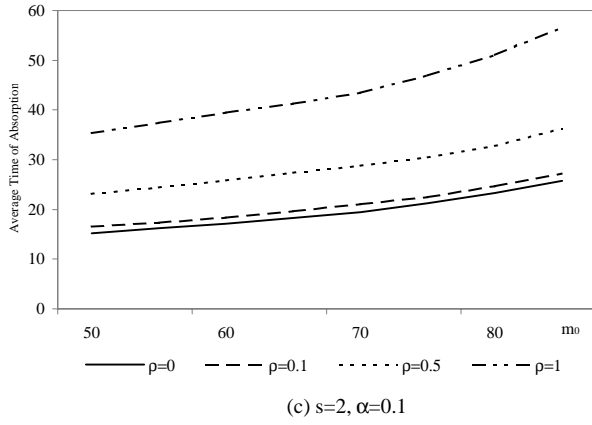
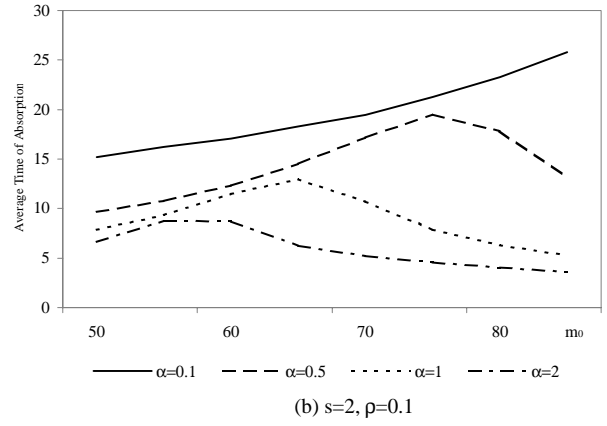
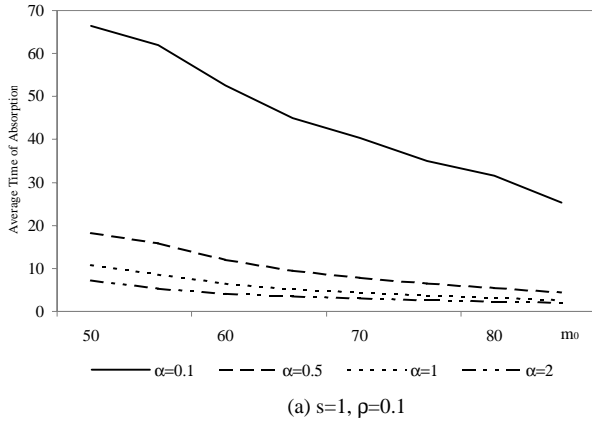


Figure 3
Average Time of Absorption in a No-Exploration Model with Two Islands as a Function of α [returns to scale], ρ [globality of information diffusion] and m [initial number of miners on island 1]
All results refer to a Montecarlo Sample Size: $M=10000$

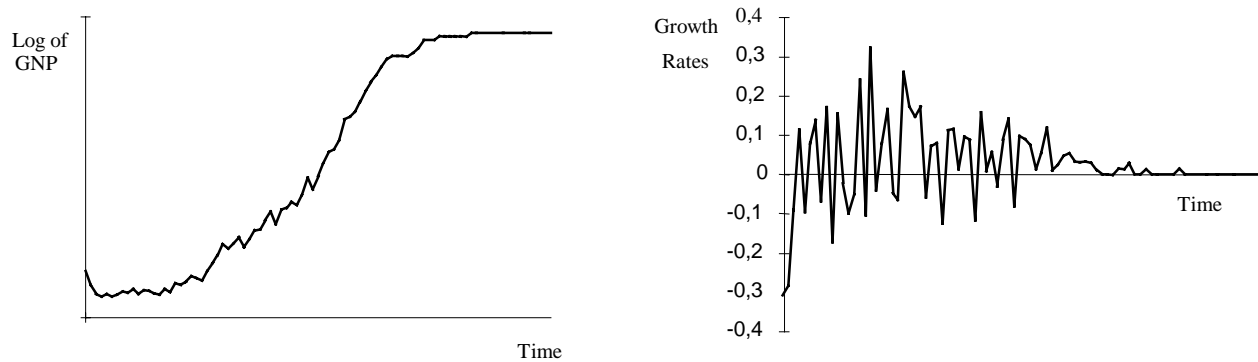


Figure 4
GNP (left) and Growth Rates in a Closed Economy without Exploration
($N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$)

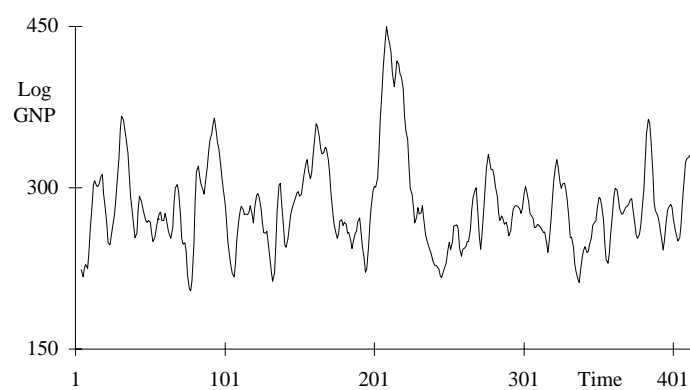


Figure 5
GNP in a Closed Economy with Exploration
($N=100$, $\rho=0.1$, $\varepsilon=0.1$, $\alpha=1.5$, $m_0=50$)

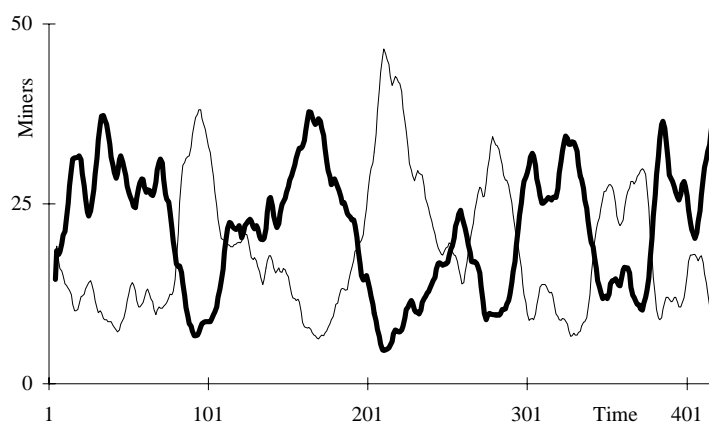


Figure 6(a)
Number of miners on islands $j=1,2$ when $s_1 = s_2$ (thick line: Island 2)
($N=100$, $\rho=0.1$, $\varepsilon=0.1$, $\alpha=1.5$, $m_0=50$)

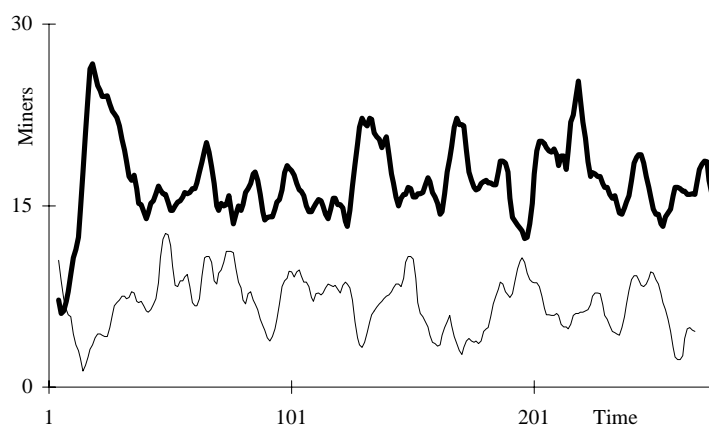


Figure 6(b)
Number of miners on islands $j=1,2$ when $s_1 > s_2$ (thick line: Island 2)
($N=100$, $\rho=0.1$, $\varepsilon=0.1$, $\alpha=1.5$, $m_0=50$)

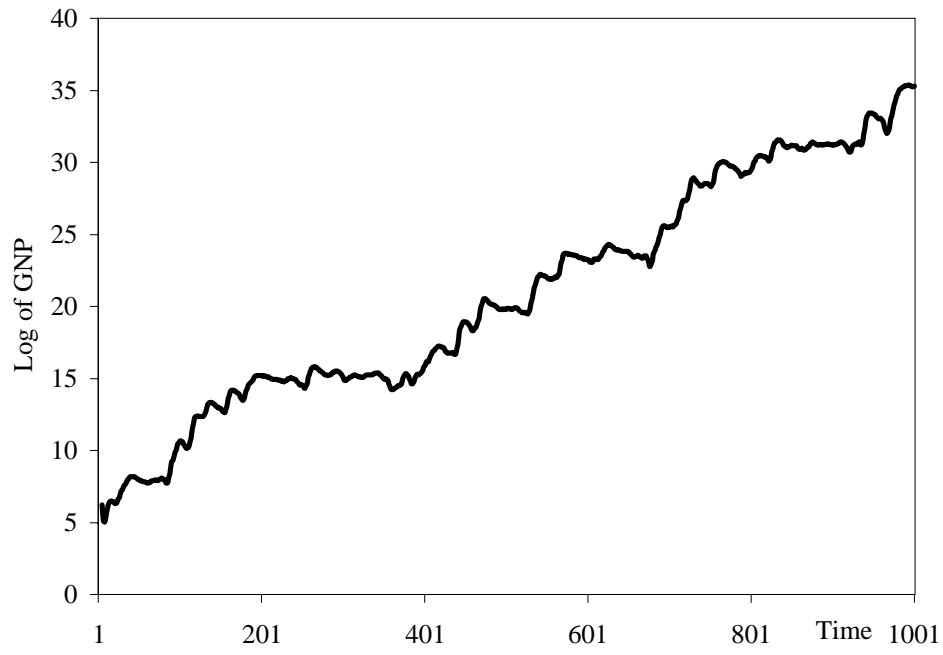


Figure 7
Exponential Growth in an Open-Ended Economy with Exploration
($N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\varphi=0.5$, $T=1000$)

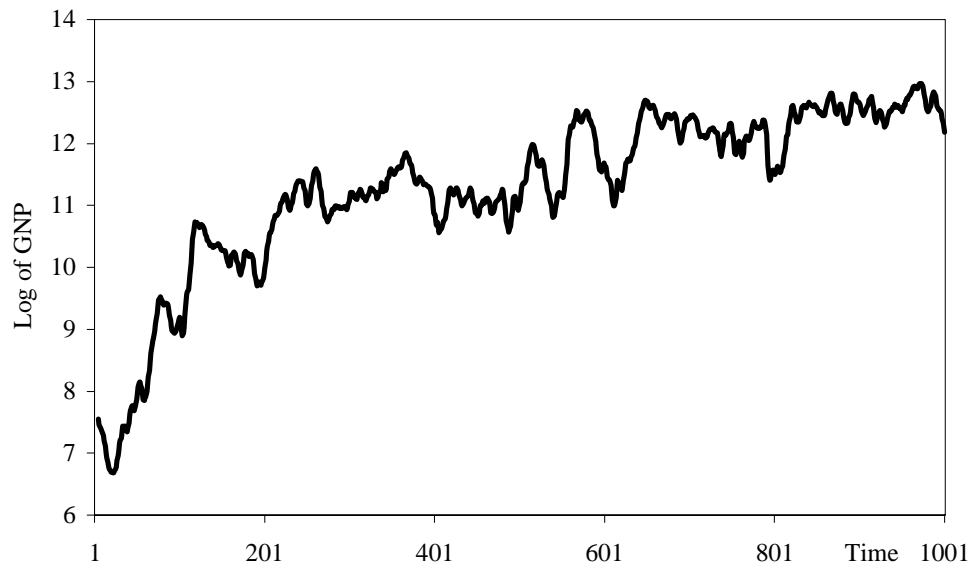


Figure 8(a)
 'Mild' Growth in an Open-Ended Economy with Exploration
 ($N=100$, $\pi=0.1$, $\rho=0.5$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\phi=0.1$, $T=1000$)

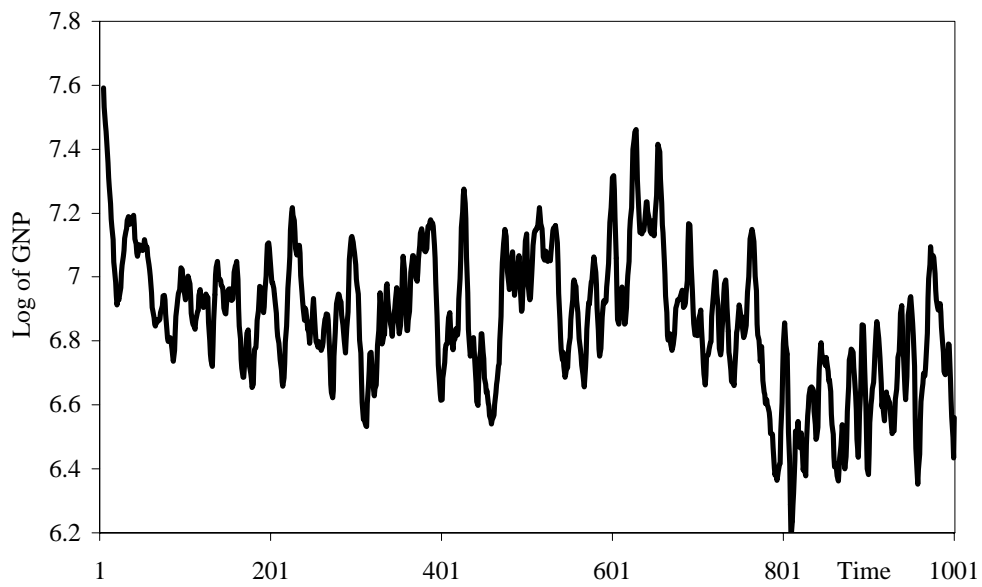


Figure 8(b)
 No Growth in an Open-Ended Economy with Exploration
 ($N=100$, $\pi=0.1$, $\rho=1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\phi=0.05$, $T=1000$)

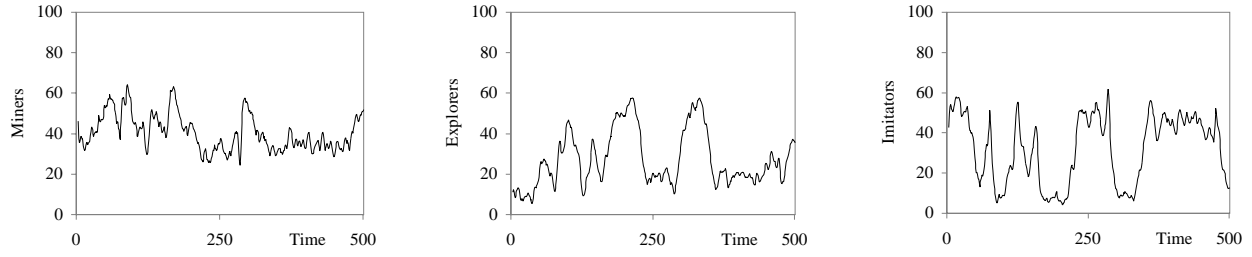


Figure 9
Number of Miners, Explorers and Imitators in an Open-Ended Economy displaying self-sustaining growth
($N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\varphi=0.5$, $T=500$)

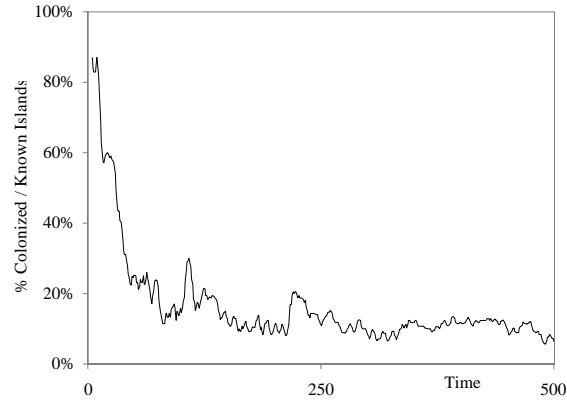


Figure 10 (a)
Percentage of Colonized Islands in an Open-Ended Economy displaying self-sustaining growth
($N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\varphi=0.5$, $T=500$)

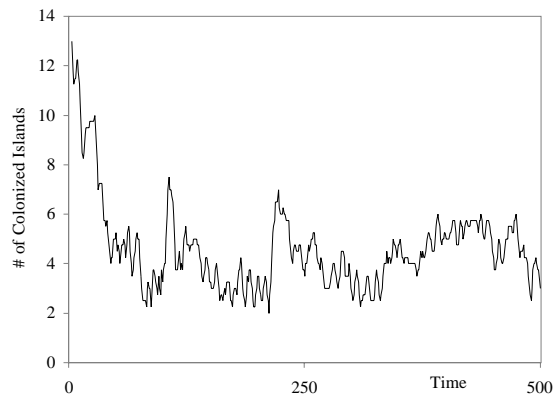


Figure 10 (b)
Number of Colonized Islands in an Open-Ended Economy displaying self-sustaining growth
($N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\varphi=0.5$, $T=500$)

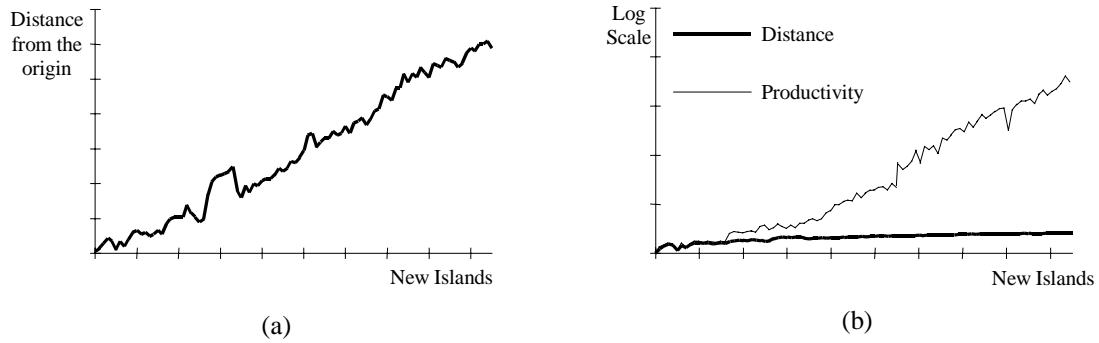


Figure 11
Distance from the origin and actual productivities of new islands in an economy displaying self-sustaining growth
($N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\varphi=0.5$)

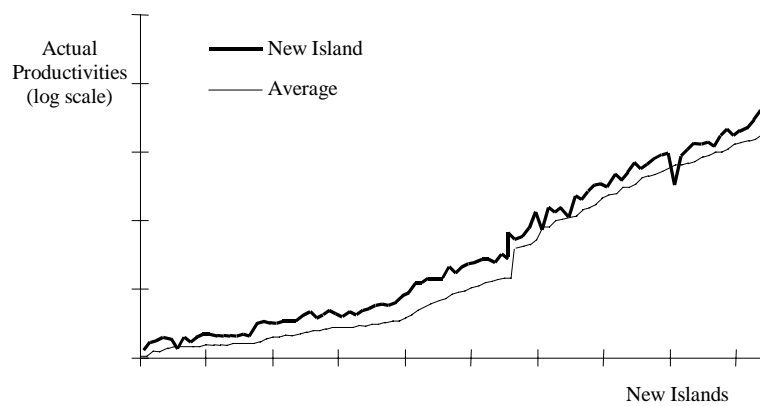


Figure 12
Actual productivity of new islands vs. average current productivity of 'known' islands
in an economy displaying self-sustaining growth
($N=100$, $\pi=0.1$, $\rho=0.1$, $\alpha=1.5$, $\varepsilon=0.1$, $\lambda=1$, $\varphi=0.5$)

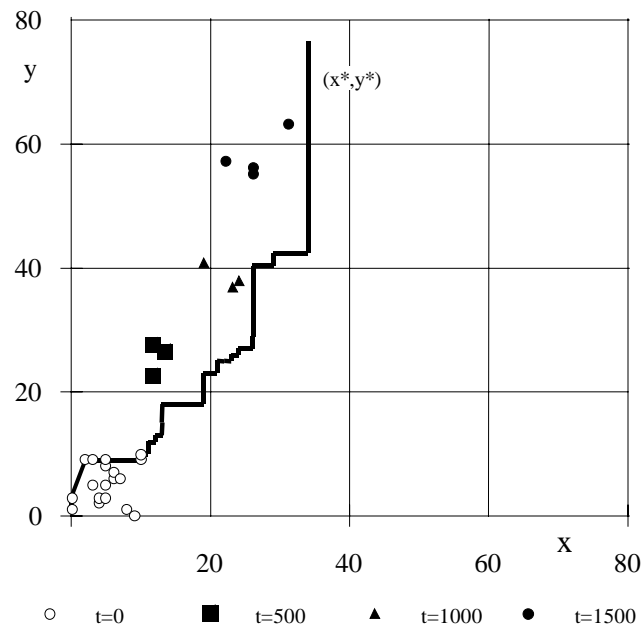


Figure 13
 Spatial Diffusion Patterns of Colonized Islands and 'Best Practice' proxy (x_t^*, y_t^*)
 in an economy displaying self-sustaining growth
 $(N=100, \pi=0.1, \rho=0.1, \alpha=1.5, \varepsilon=0.1, \lambda=1, \varphi=0.5)$

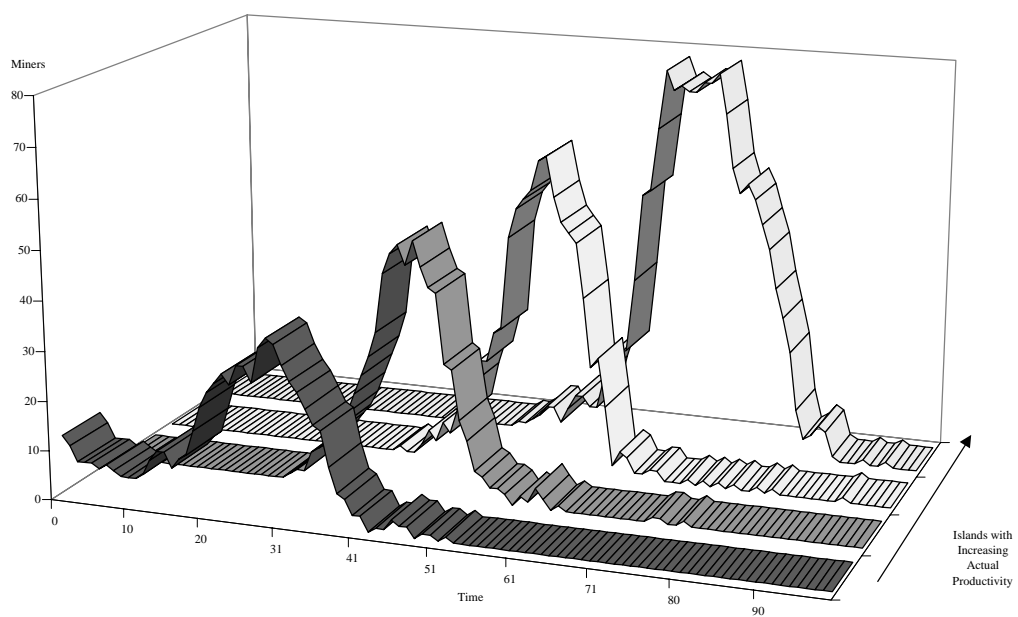
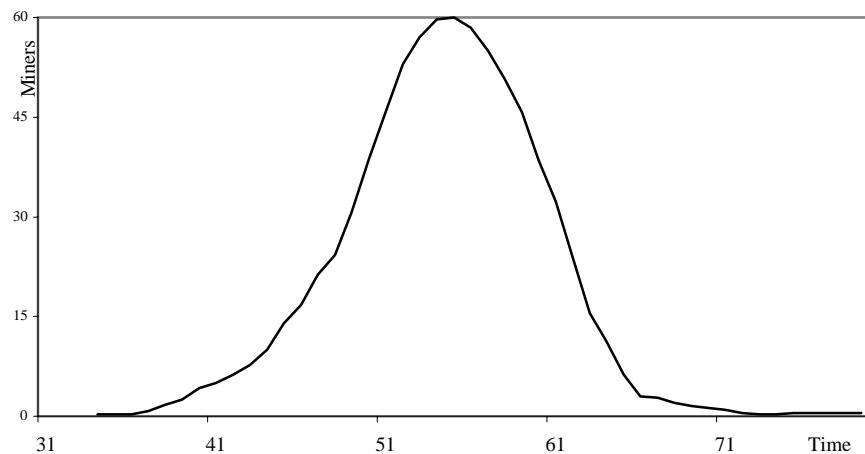
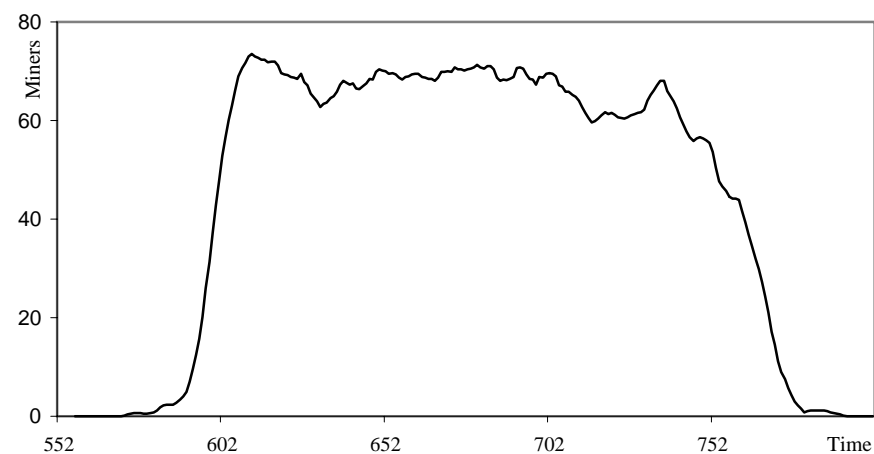


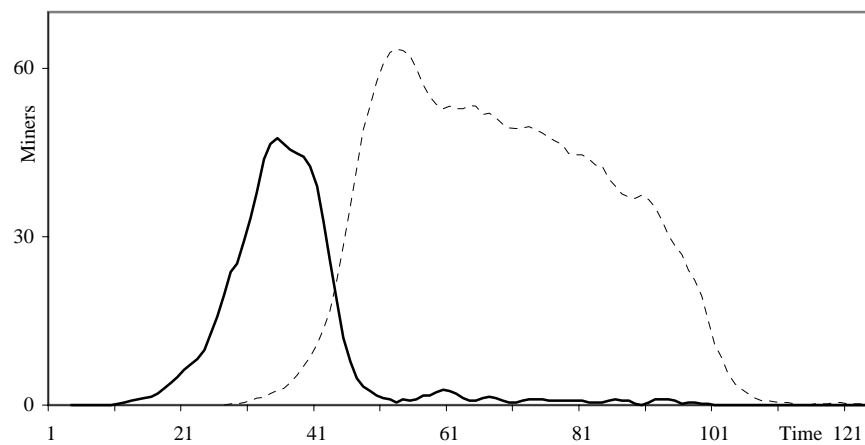
Figure 14
Diffusion of Technological Innovations. An Example of Overlapping (S-Shaped) Patterns of Adopti
($N=100$, $\lambda=1$, $\pi=0.1$, $\rho=0.01$, $\phi=0.5$, $\alpha=1.4$, $\varepsilon=0.1$, $T=1000$)



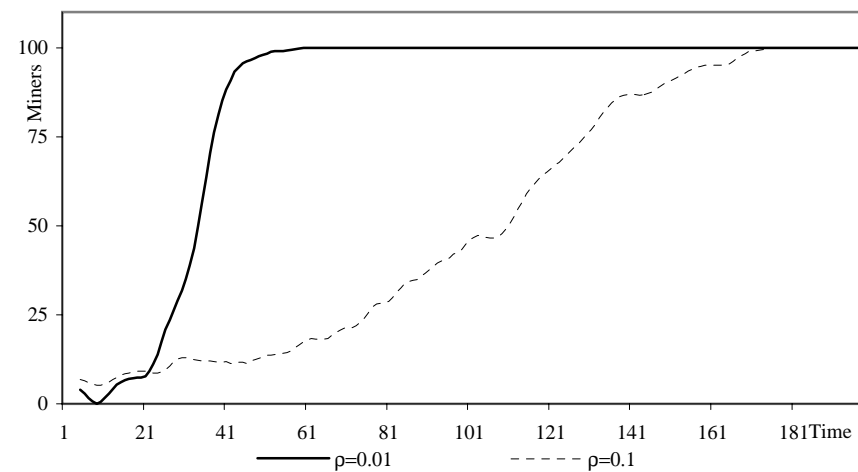
(a) The Typical Adoption Pattern of an 'Incremental' Innovation
(Low Opportunity Setting: $\lambda=1$, $\pi=0.1$; $\rho=0.1$, $\varepsilon=0.1$, $\phi=0.5$)



(b) The Typical Adoption Pattern of a 'Radical' Innovation
(High Opportunity Setting: $\lambda=5$, $\pi=0.4$; $\rho=0.1$, $\varepsilon=0.1$, $\phi=0.5$)

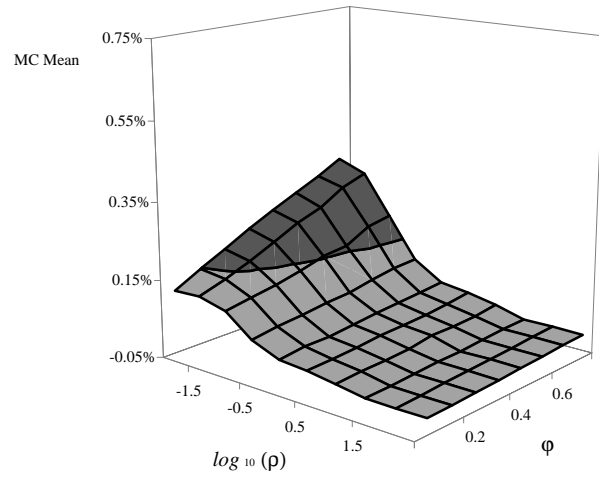


(c) 'Incremental' vs. 'Radical' Innovation Adoption with High Willingness to Explore
(Low Opportunity Setting: $\lambda=1$, $\pi=0.1$; $\rho=0.1$, $\varepsilon=0.4$, $\phi=0.5$)

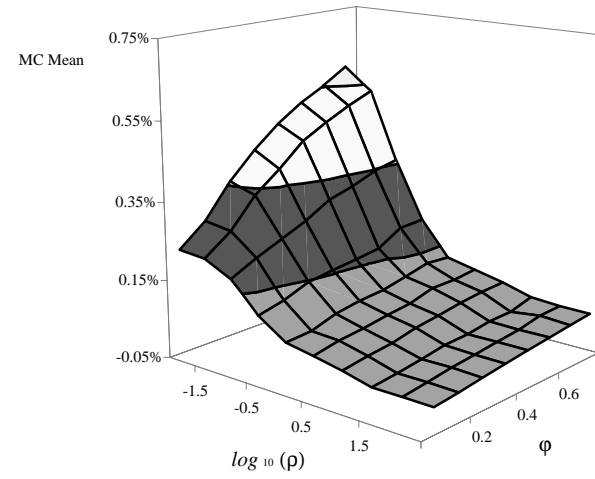


(d) The Effect of Information Diffusion in a No-Exploration Setting
(10 Islands)

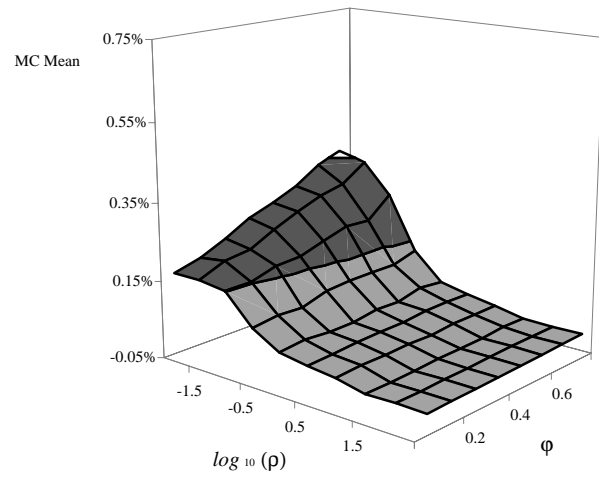
Figure 15
Some Examples of Patterns of Innovation Diffusion and Adoption
(Unchanged Parameters: $N=100$, $\alpha=1.4$, $T=1000$)



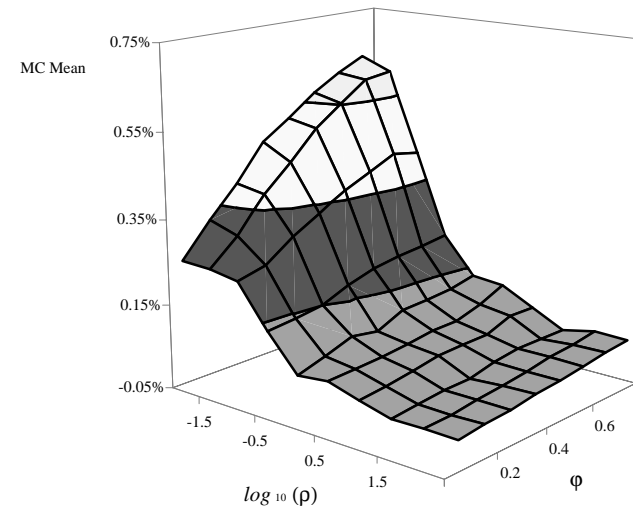
(a) $\lambda=1, \pi=0.1$



(b) $\lambda=5, \pi=0.1$



(c) $\lambda=1, \pi=0.4$



(d) $\lambda=5, \pi=0.4$

Figure 16
Means of Montecarlo AGR Distributions as a function of $(\lambda, \pi, \rho, \phi)$
($\alpha=1.4, \varepsilon=0.1, N=100, T=1000, M=10000$)

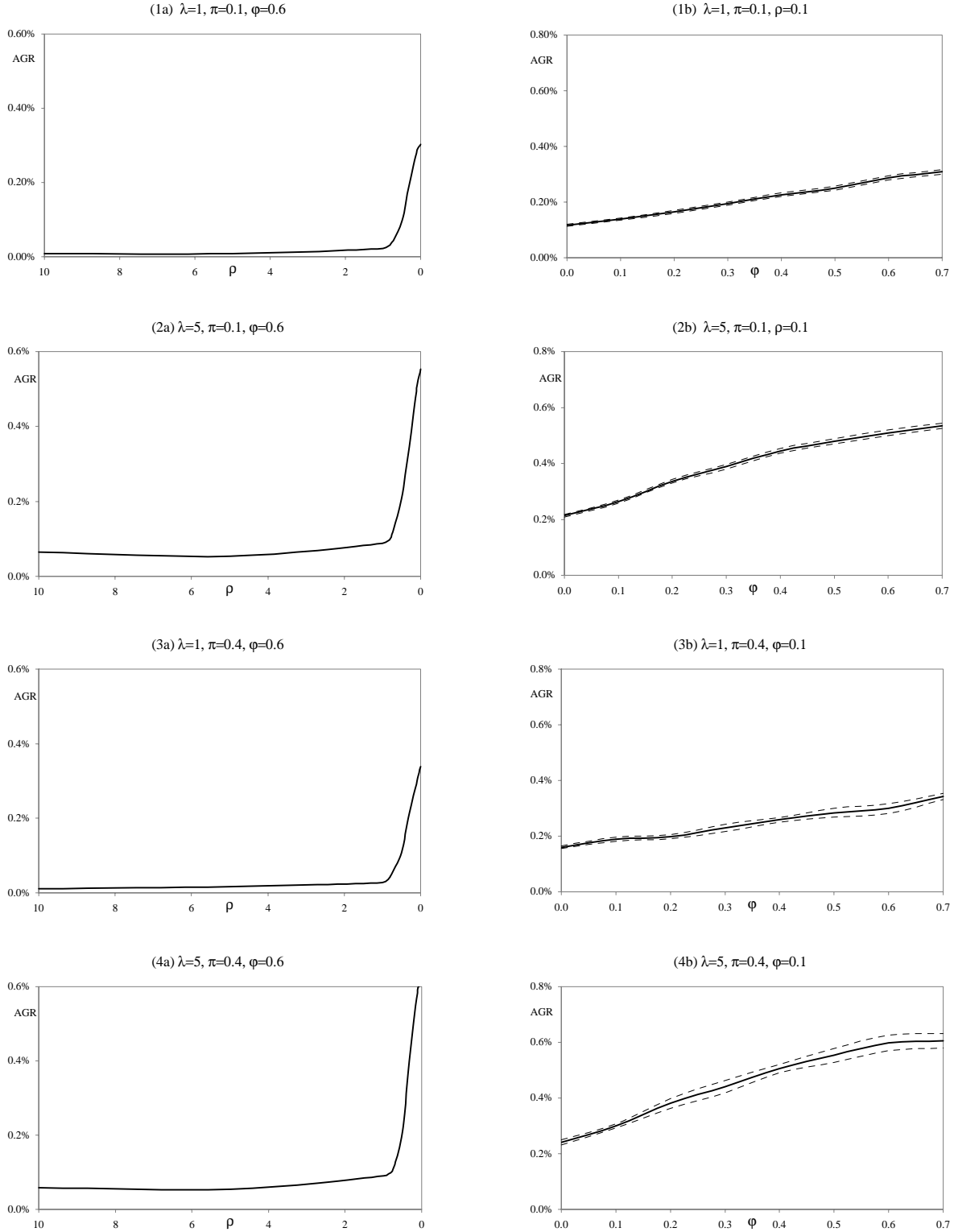
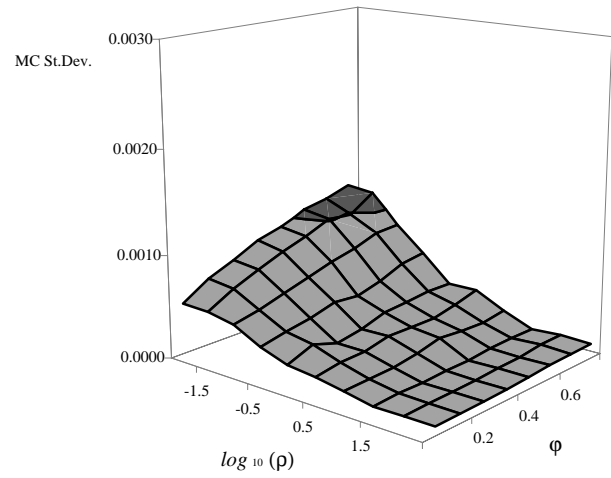
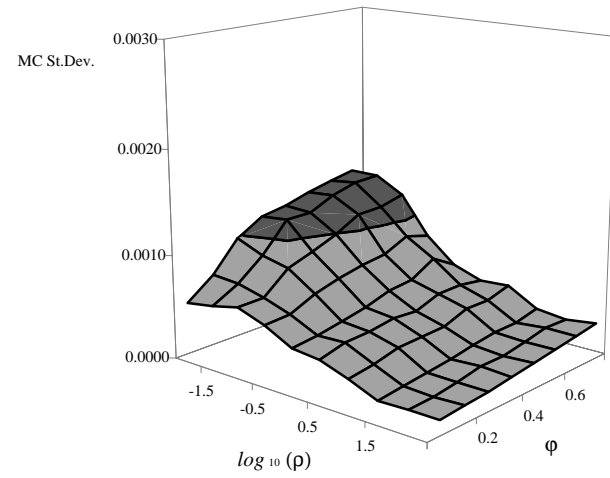


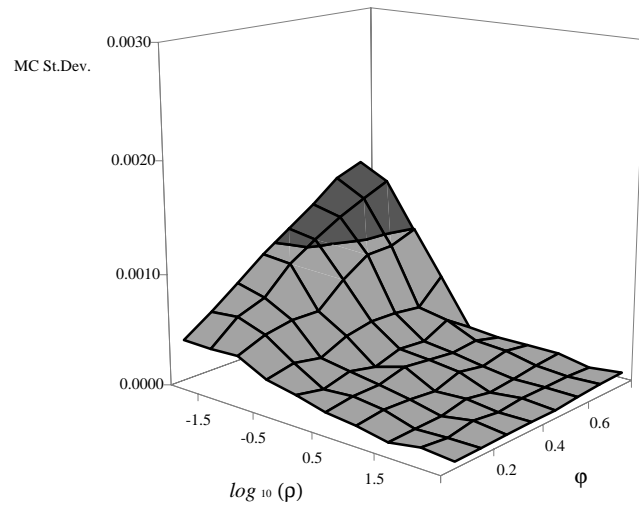
Figure 17
 Linear vs. Non-Linear behavior of Means of Montecarlo AGR Distributions as a function of (ρ, ϕ)
 Parameter Setup: $\alpha=1.4, \epsilon=0.1, N=100, T=1000, M=10000$; $\pm 5\%$ confidence intervals shown when relevant as dotted lines



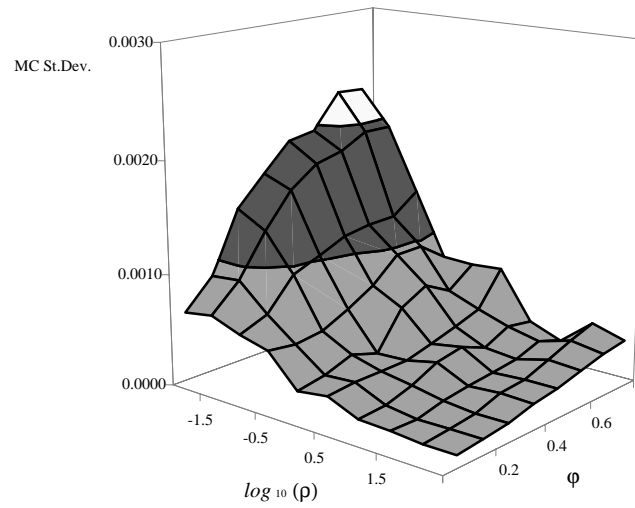
(a) $\lambda=1, \pi=0.1$



(b) $\lambda=5, \pi=0.1$



(c) $\lambda=1, \pi=0.4$



(d) $\lambda=5, \pi=0.4$

Figure 18
Standard Deviations of Montecarlo AGR Distributions as a function of $(\lambda, \pi, \rho, \phi)$
($\alpha=1.4, \varepsilon=0.1, N=100, T=1000, M=10000$)

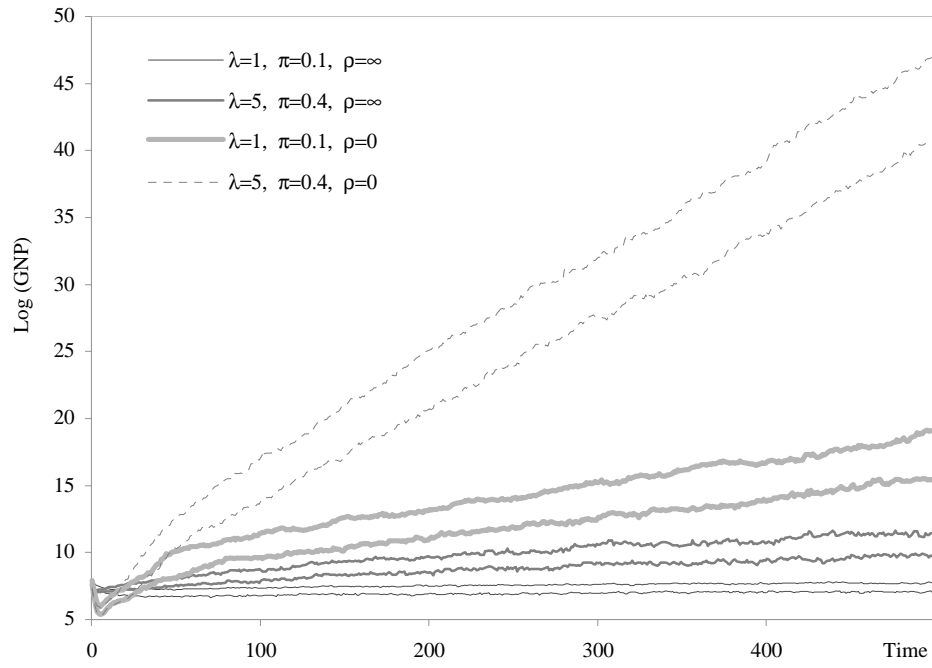
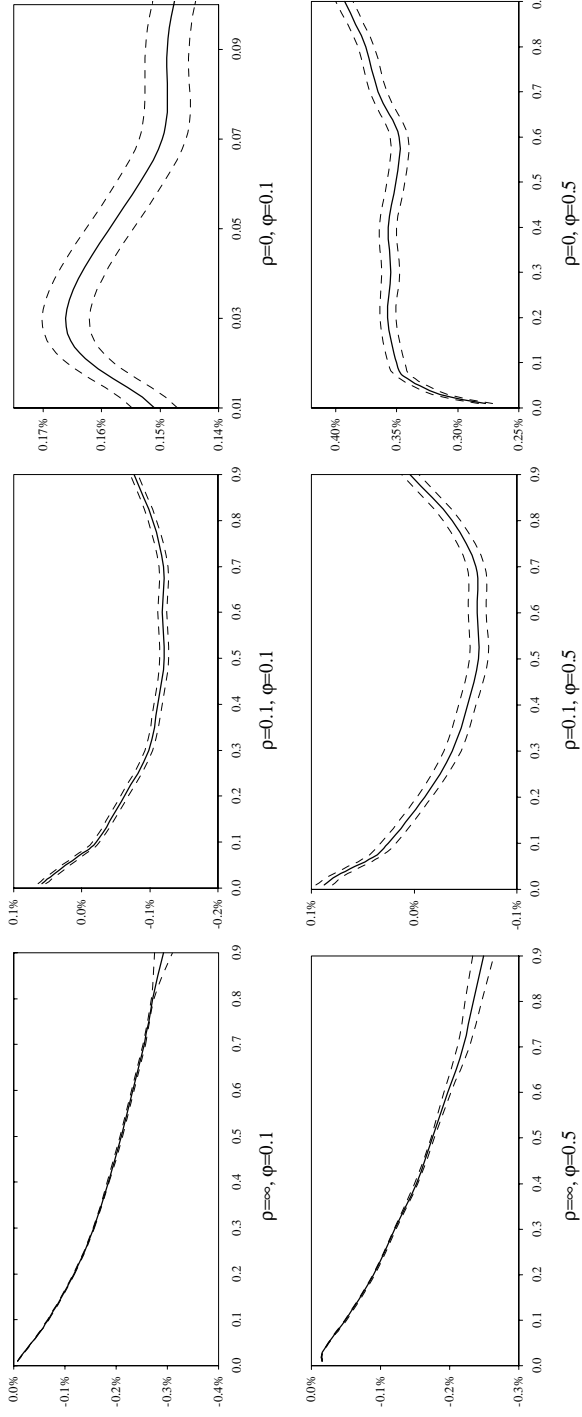


Figure 19
Time-Evolution of 5-percentile and 95-percentile over M=10000 Montecarlo Simulations
($\alpha=1.5, \phi=0.4, \varepsilon=0.1, N=100$)

Low Opportunities ($\lambda=1, \pi=0.1$)



High Opportunities ($\lambda=5, \pi=0.4$)

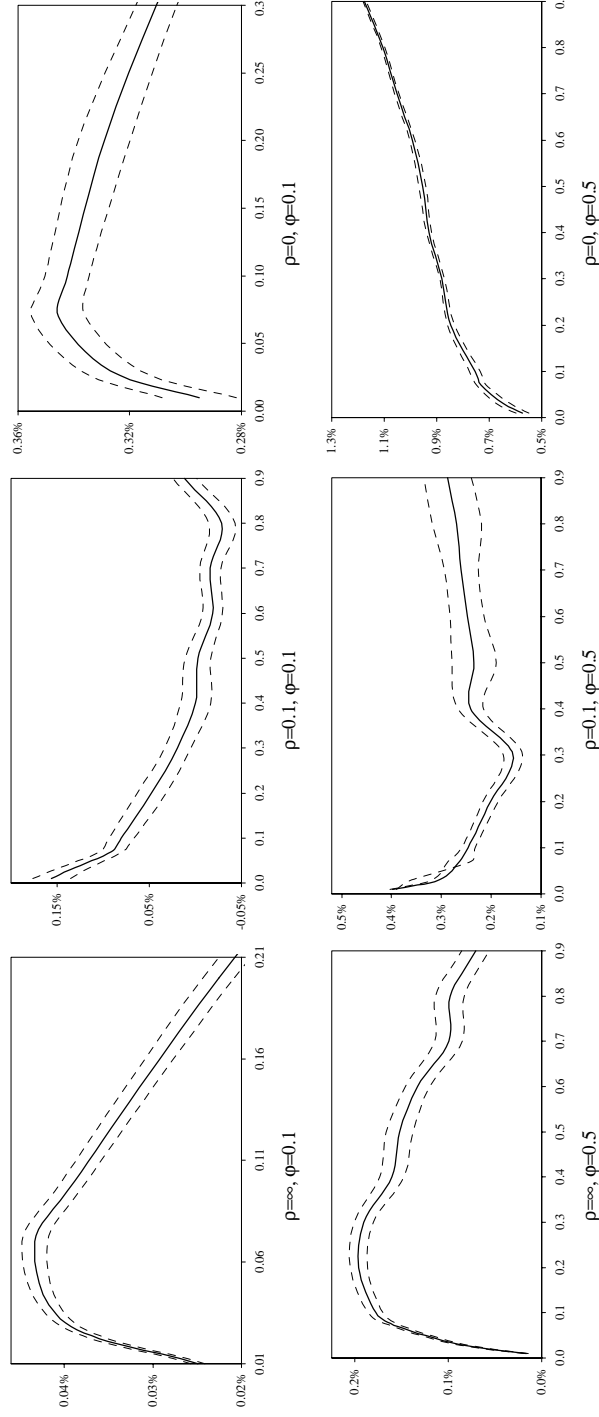


Figure 20
Montecarlo Mean of AGR (y-axes) as a Function of Willingness to Explore (x-axes)
Parameter Setup: $\alpha=1.4$, $N=100$, $M=10000$. Dotted Lines: 5% Confidence Intervals

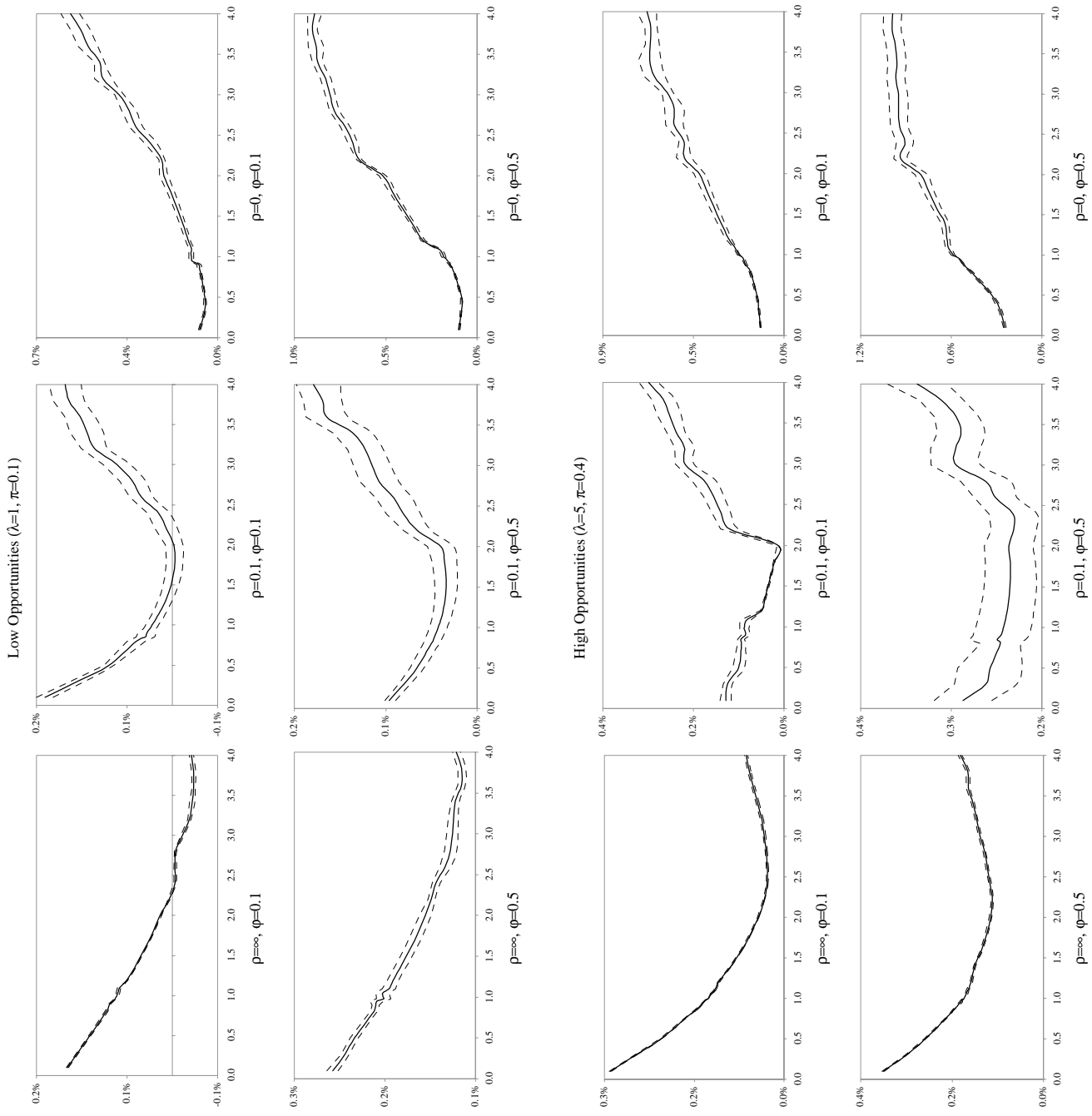
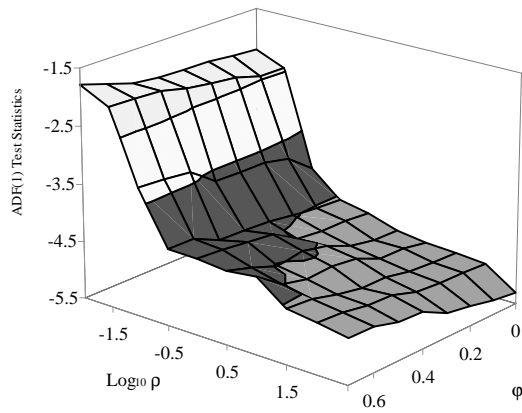
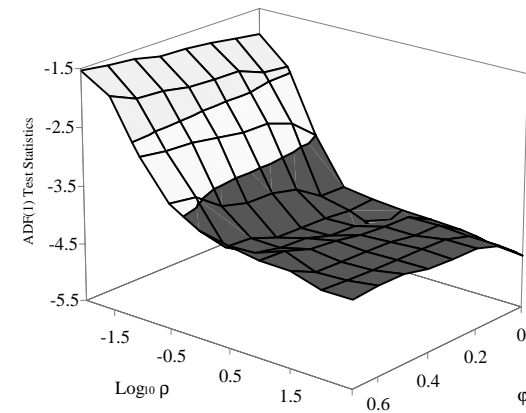


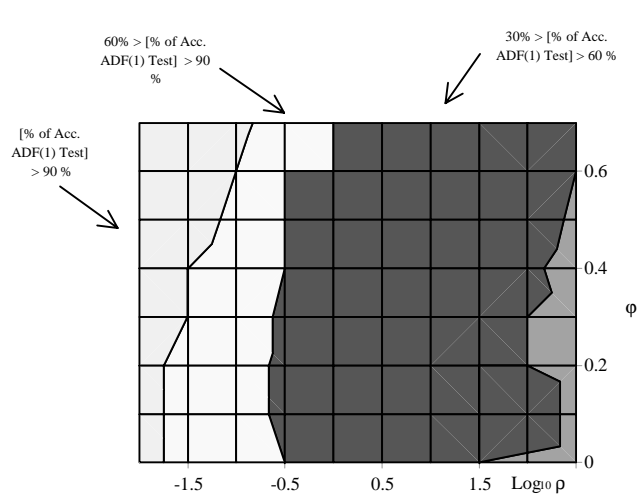
Figure 21
Montecarlo Mean of AGR (y-axes) as a Function of Increasing Returns to Scale in Production α (x-axes)
Parameter Setup: $\varepsilon=0.1, N=100, M=10000$; Dotted Lines: 5% Confidence Intervals



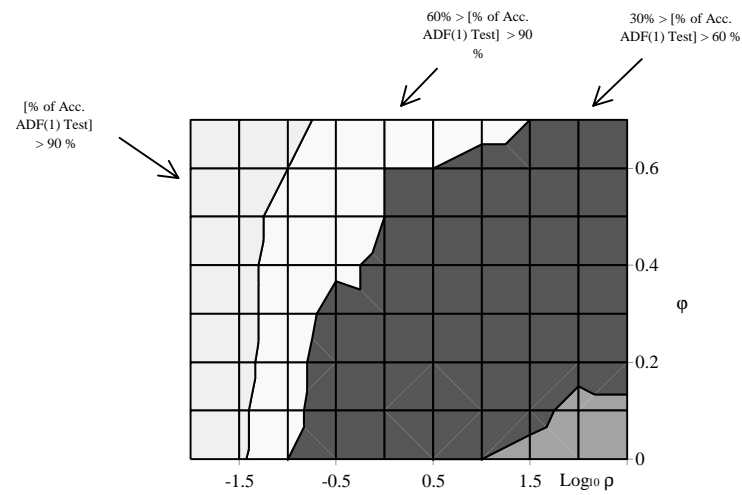
(a) MC Mean of ADF(1) Test Statistics (Low Opportunities: $\lambda=1$, $\pi=0.1$)



(b) MC Mean of ADF(1) Test Statistics (High Opportunities: $\lambda=5$, $\pi=0.4$)



(a) Frequency of Acceptance of the ADF(1) Test Statistics
(Low Opportunities: $\lambda=1$, $\pi=0.1$)

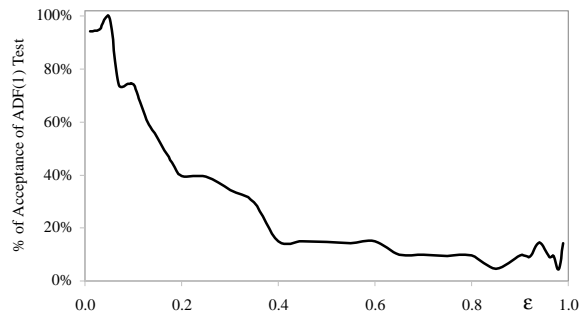


(d) Frequency of Acceptance of the ADF(1) Test Statistics
(High Opportunities: $\lambda=5$, $\pi=0.4$)

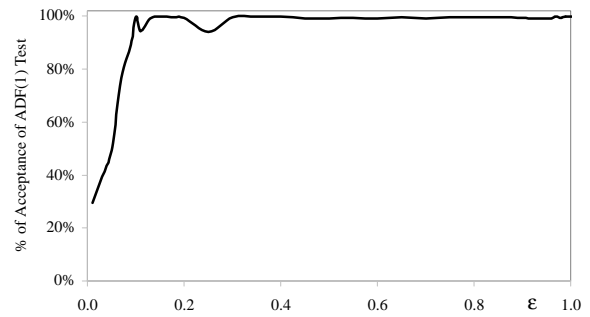
Figure 22

A Montecarlo Analysis of Thresholds in the Emergence of Unit-Roots in the Log(GNP) Time-Series

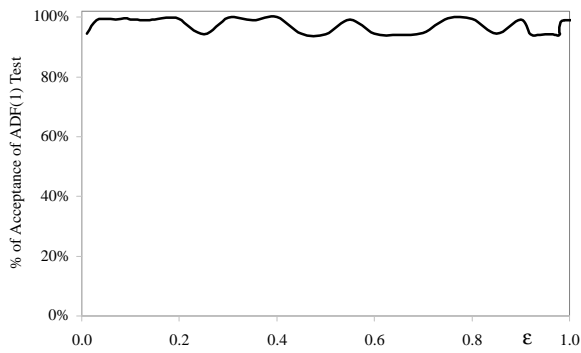
(Critical Values: -3.441 (5%), -4.022 (1%); Parameter Setup $\epsilon=0.1$, $\alpha=1.5$, $N=100$, $T=1500$, $M=10000$)



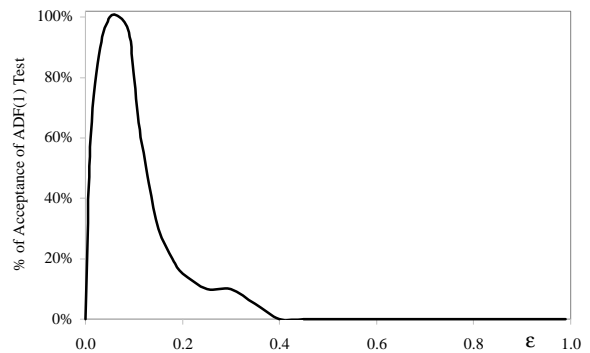
(a) Regime 2: $\lambda=5, \pi=0.4, \rho=0.1, \phi=0.1$



(b) Regime 3: $\lambda=1, \pi=0.1, \rho=0, \phi=0.5$



(c) Regime 3: $\lambda=5, \pi=0.4, \rho=0, \phi=0.5$

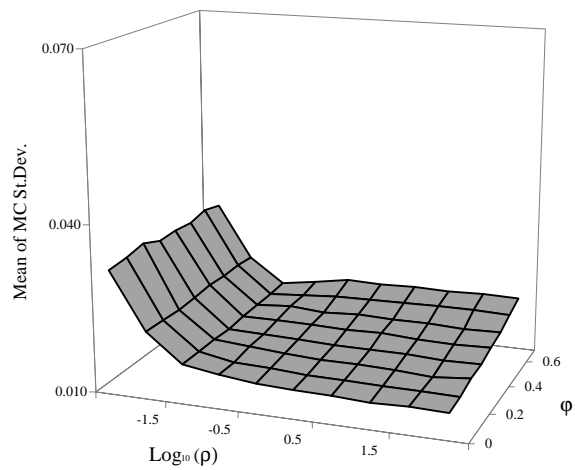


(d) Regime 4: $\lambda=5, \pi=0.4, \rho=\infty, \phi=0.1$

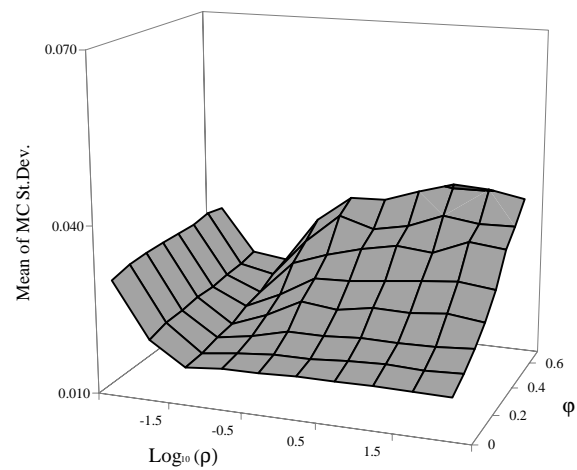
Figure 23

MC Frequencies of Acceptance of ADF(1) tests as a Function of the Willingness to Explore (ϵ)

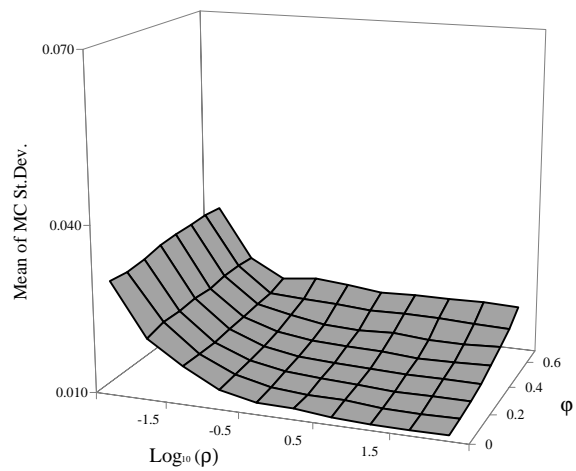
Critical Values: -3.441 (5%), -4.022 (1%); Parameter Setup: $\alpha=1.4, N=100, T=1500, M=10000$



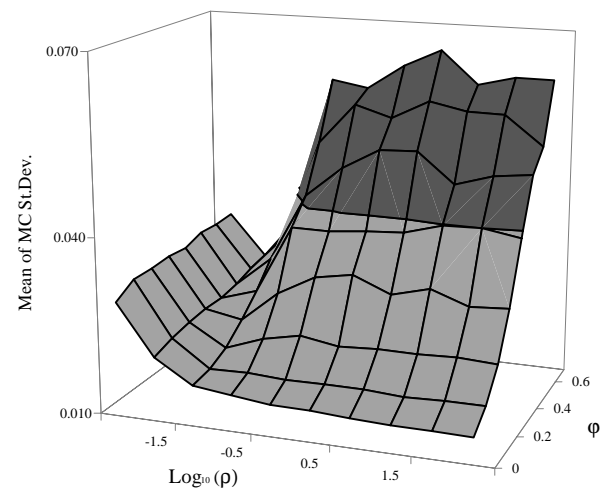
(a) $\lambda=1, \pi=0.1$



(b) $\lambda=5, \pi=0.1$



(c) $\lambda=1, \pi=0.4$



(d) $\lambda=5, \pi=0.4$

Figure 24
Means of MC Standard Deviations of GNP Time-Series Growth Rates
($\alpha=1.4, \varepsilon=0.1, N=100, M=10000, T=500$)

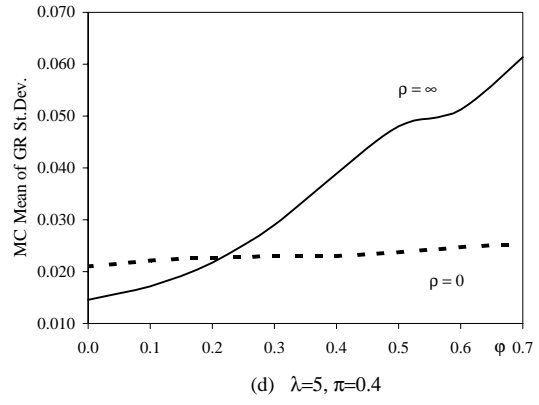
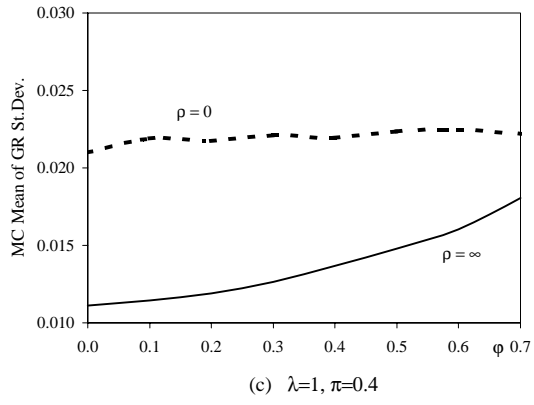
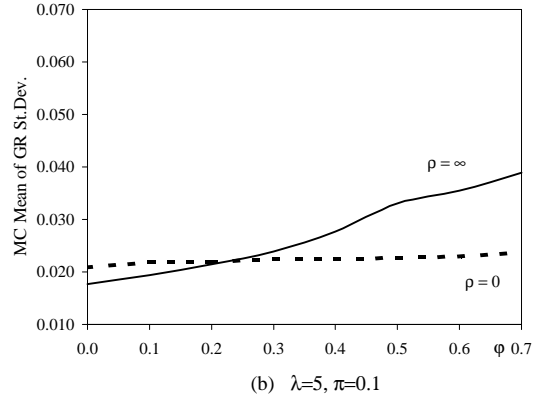
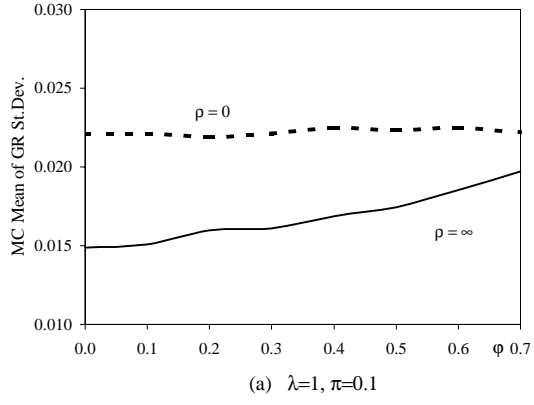
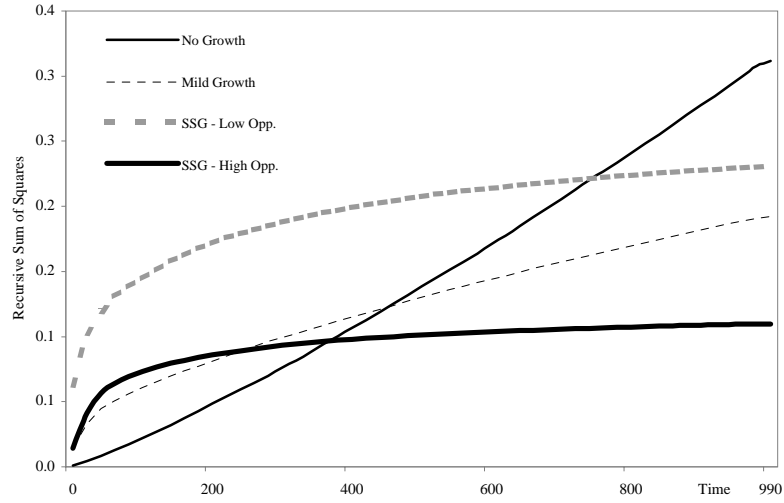
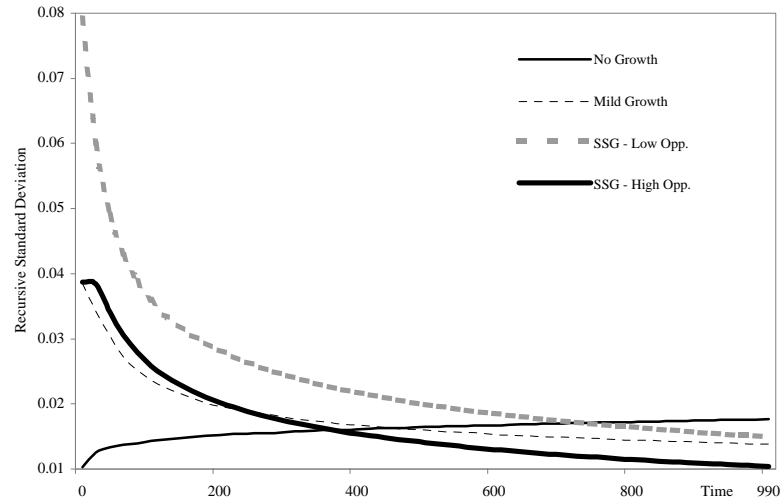


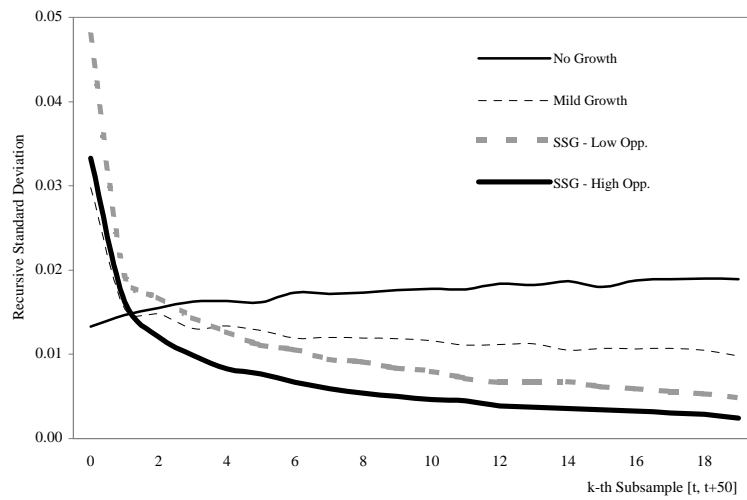
Figure 25
 Path Dependency (ϕ) and the MC Standard Deviation of GNP Time-Series Growth Rates
 ($\alpha=1.4, \varepsilon=0.1, N=100, M=10000, T=500$)



(a) Montecarlo Means of Recursive Sum of Squares of GRTS Deviations



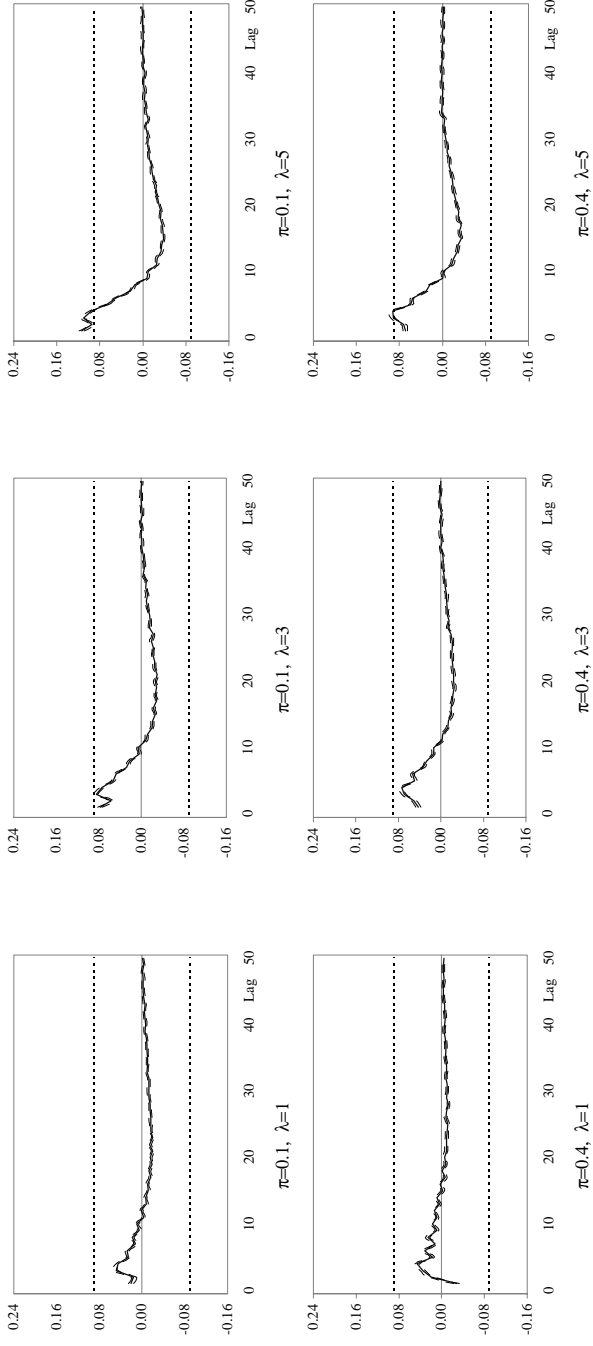
(b) Montecarlo Means of Recursive Standard Deviations of GRTS



(c) Montecarlo Means of Recursive Standard Deviations over disjoint subsamples

Figure 26
Time Evolution of GNP Time-Series Growth Rates (GRTS) Volatility in Four Paradigmatic Growth Regimes
Parameter Setup: $\alpha=1.4$, $\epsilon=0.1$, $M=10000$; Growth Regimes: See Table 2

(a) Local Information Diffusion, Low Path Dependency $\rho=0.01$, $\phi=0.2$



(b) Global Information Diffusion, High Path Dependency $\rho=0$, $\phi=0.5$

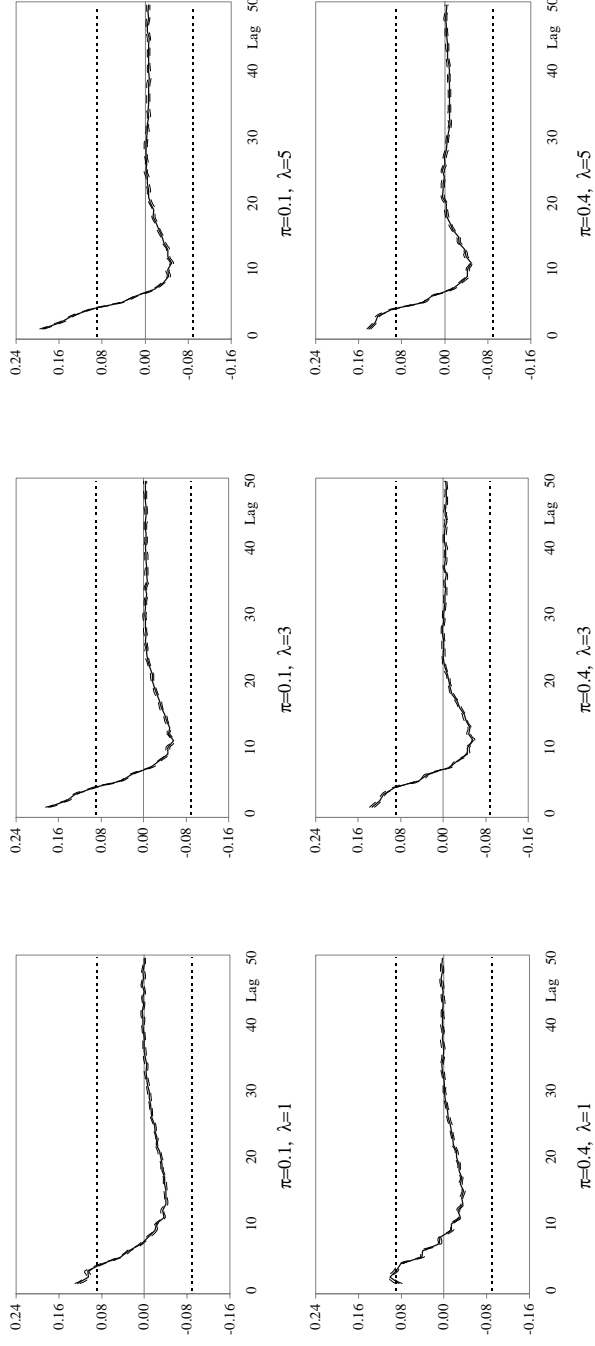


Figure 27

MC Mean of Growth Rates Autocorrelation Functions ($\pm 95\%$ Confidence Intervals)

Horizontal Dotted Lines: 95% Bartlett Bands ($\pm 2/\text{Sqrt}(T)$): Parameter Setup $\rho=1.4$, $\varepsilon=0.1$, $N=100$, $M=10000$, $T=500$

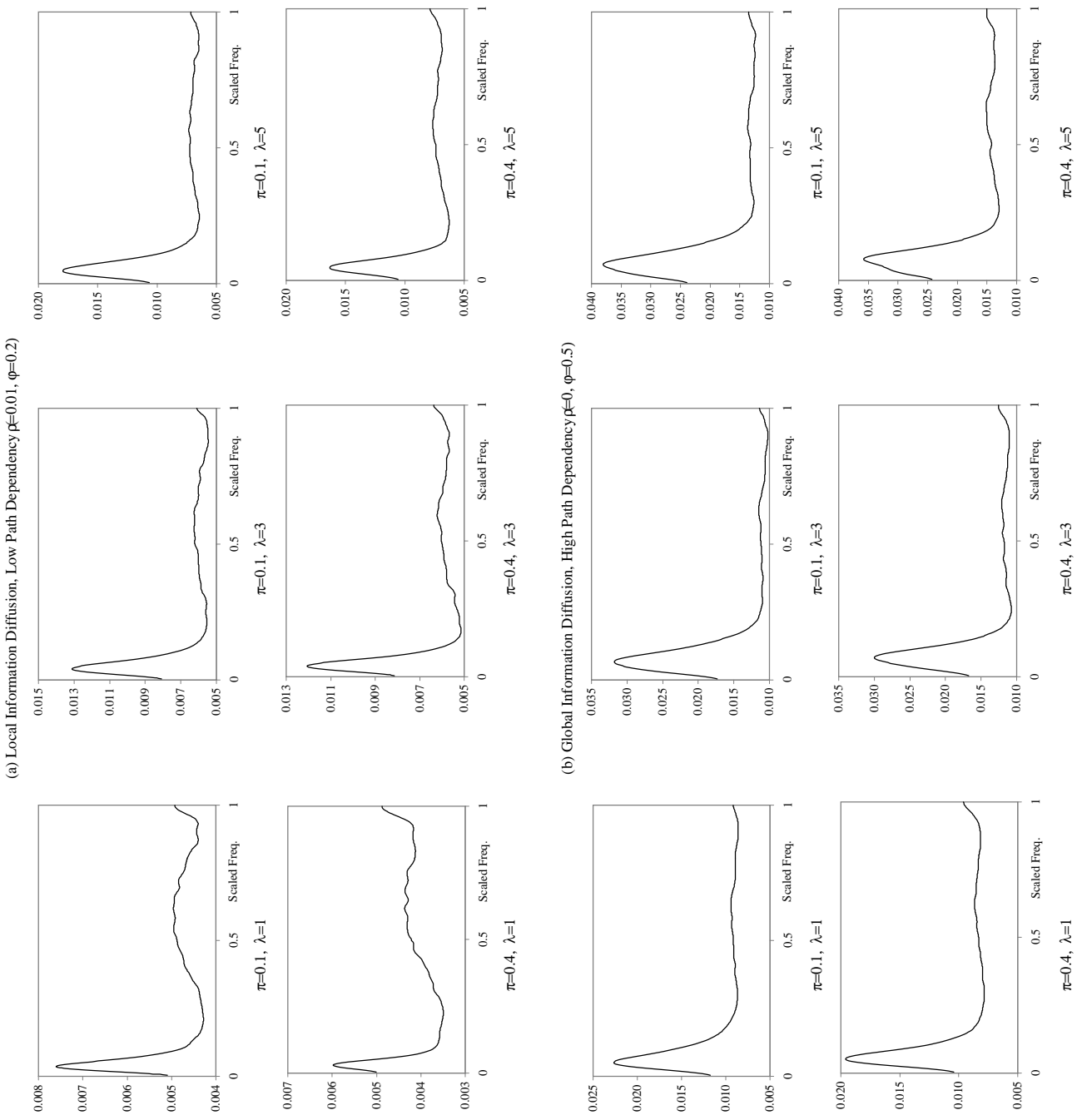


Figure 28
MC Estimate of GNP Growth Rates Spectral Density

Frequencies are Scaled by π ; Spectra computed by smoothing the periodogram using a Bartlett window (width = 50); Parameter Setup: $\alpha=1.4$, $\varepsilon=0.1$, $N=100$, $M=10000$, $T=500$

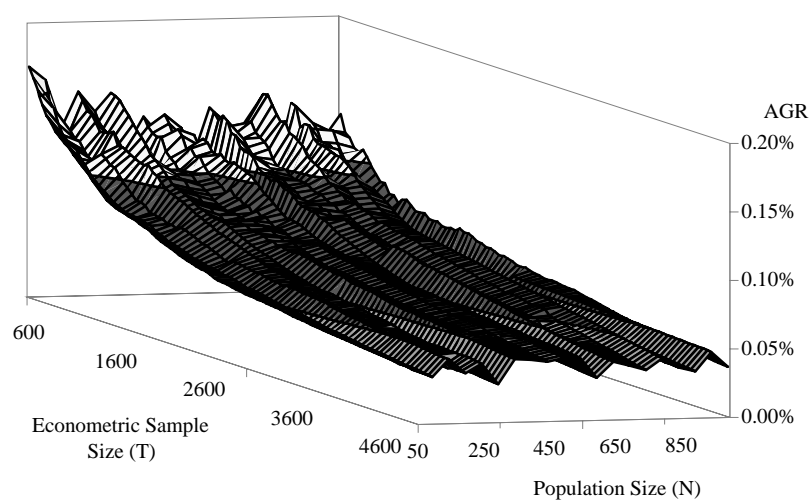


Figure 29
MC Mean of AGR as a function of the Econometric Sample Size (T) and Population Size (N)
($\lambda=1$, $\pi=0.1$, $\rho=0.01$, $\phi=0.5$, $\alpha=1.4$, $\varepsilon=0.1$, $M=10000$)

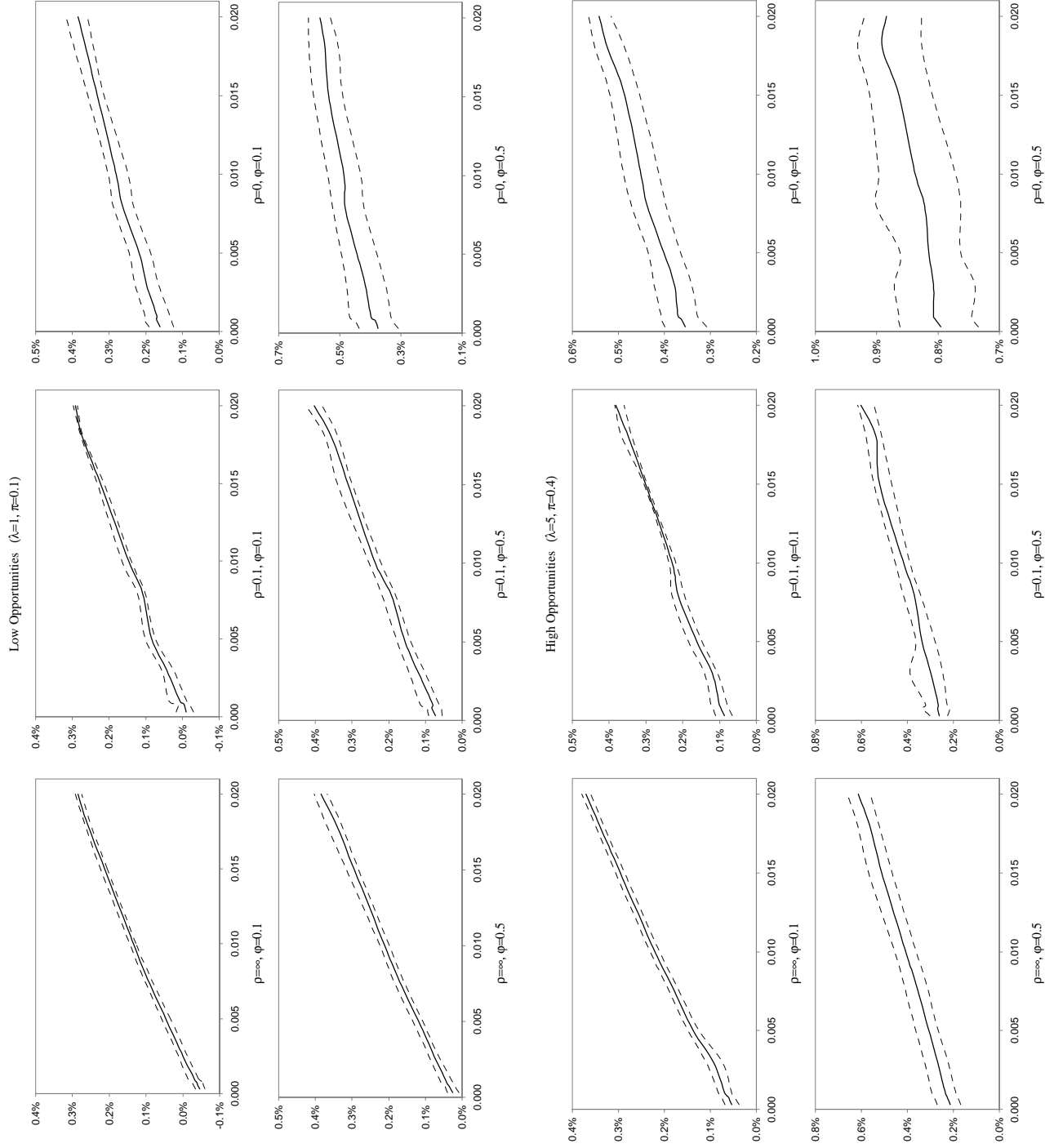


Figure 30
A Model with Population Growth: Monte Carlo Median of AGR (y-axes) as a Function of Population Growth Rate η (x-axes)
(Dotted Lines: 25% and 75% Percentiles of the Monte Carlo Distributions; Parameters: Setup=0.1, $\alpha=1.4$, $N=100$, $M=10000$)

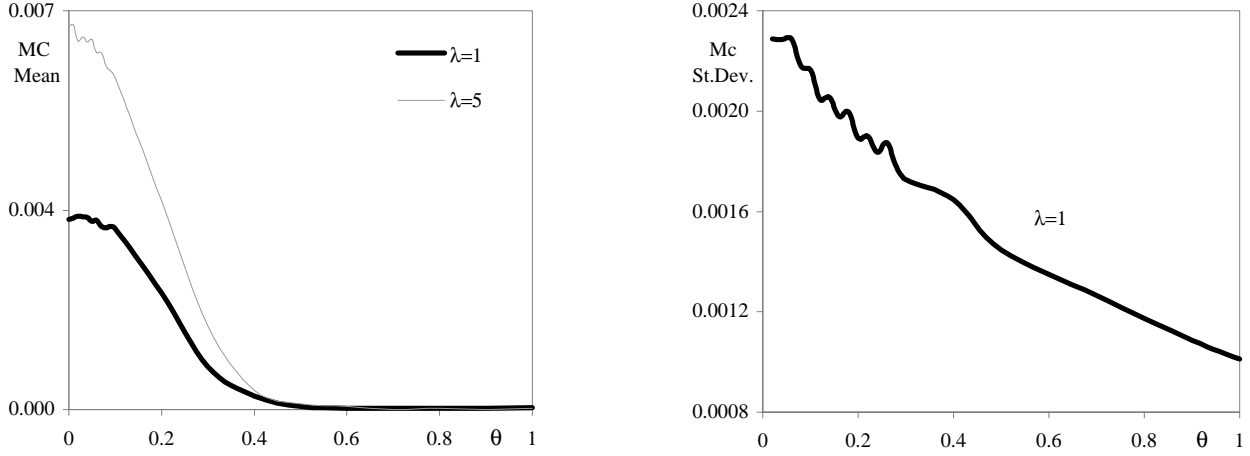


Figure 31 (a)
Globally Decreasing Opportunities. Mean and Standard Deviation
of MC Distributions of AGR as a function of the Slope of the Opportunity Landscape(θ)
($\pi_0=0.1$, $\rho=0.01$, $\varphi=0.5$, $\alpha=1.4$, $\varepsilon=0.1$, $N=100$, $T=500$, $M=1000$)

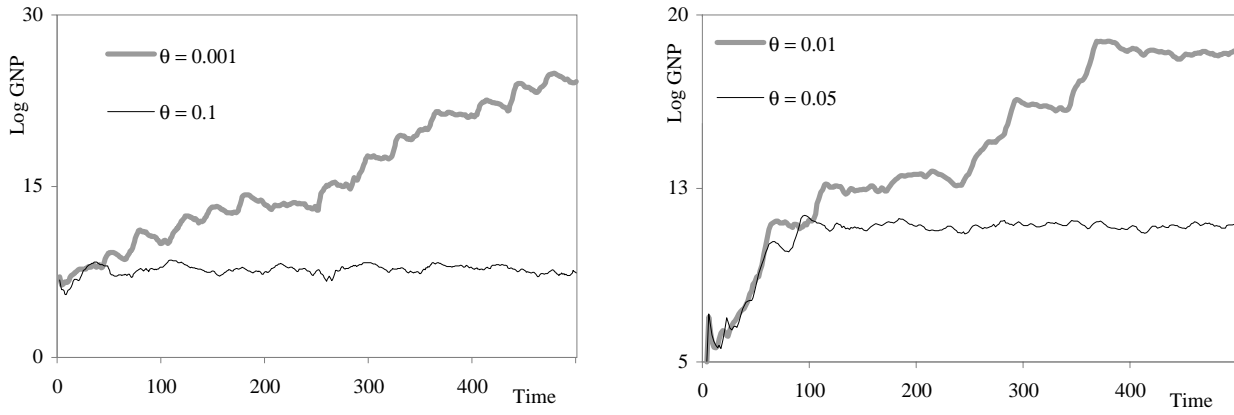


Figure 31 (b)
Globally Decreasing Opportunities: Some Examples of GNP Time Series with Global Information Diffusion
($\lambda=1$, $\pi_0=0.1$, $\rho=0.01$, $\varphi=0.5$, $\alpha=1.4$, $\varepsilon=0.1$, $N=100$, $T=500$, $M=1000$)

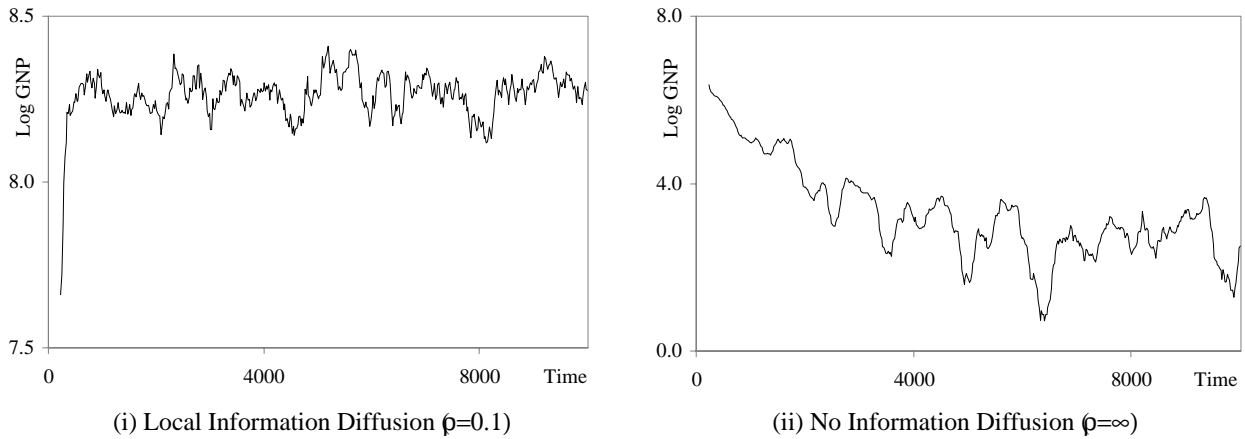
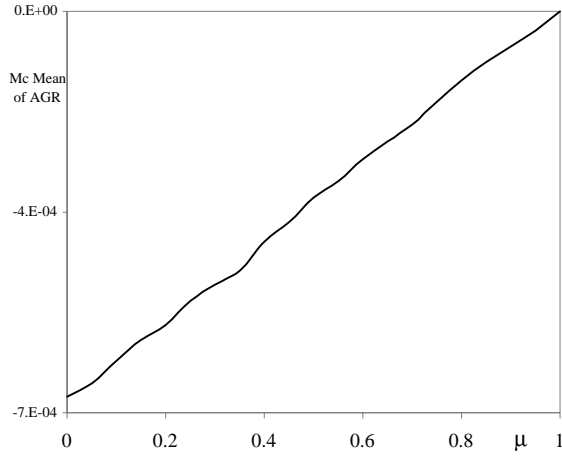
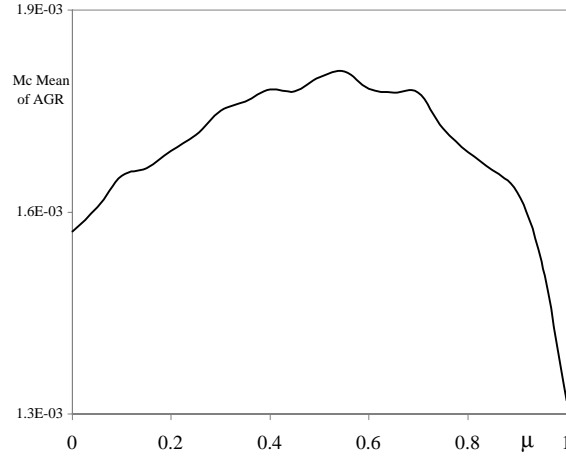


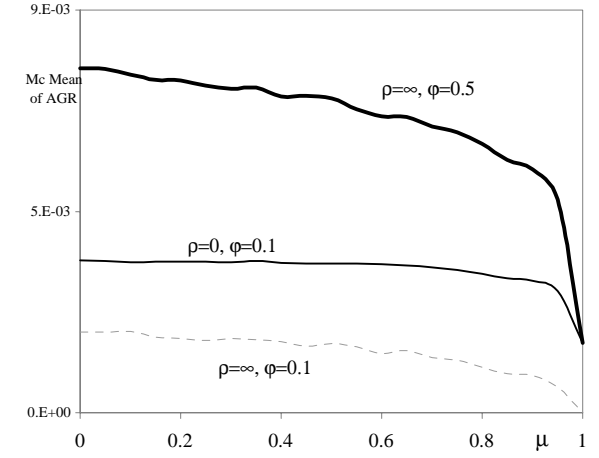
Figure 31 (c)
Globally Decreasing Opportunities: Some Examples of GNP Time Series with Local Information Diffusion
($\lambda=1$, $\pi_0=0.1$, $\varphi=0.5$, $\theta=5$, $\alpha=1.4$, $\varepsilon=0.1$, $N=100$, $T=500$, $M=1000$)



(i) Low Opportunities ($\lambda=1$, $\pi=0.1$), No Information Diffusion ($\rho=\infty$)
Low Path Dependency ($\varphi=0.1$)

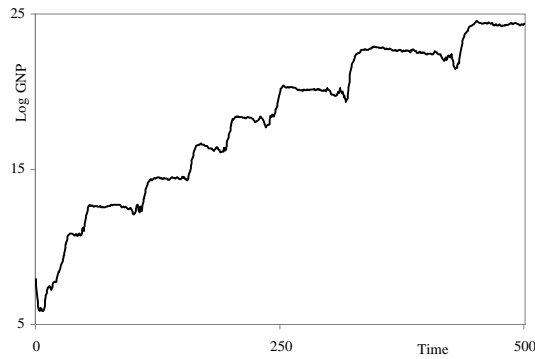


(ii) Moderate Opportunities ($\lambda=2$, $\pi=0.2$), Global Information
Diffusion ($\rho=\infty$), No Path Dependency ($\varphi=0$)

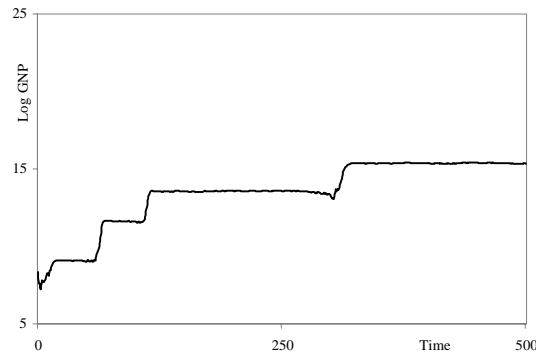


(iii) High Opportunities ($\lambda=5$, $\pi=0.4$)

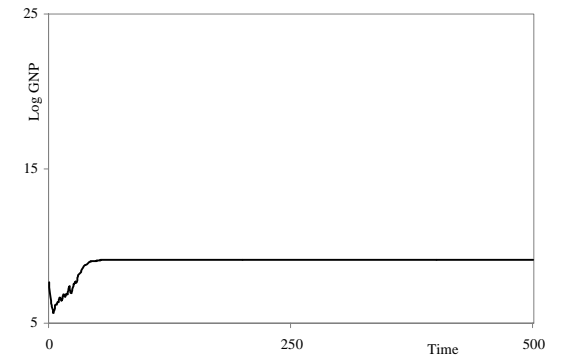
Figure 32 (a)
MC Means of AGR as a Function of the Share of 'Sedentary' Agents in the Economy μ
($\alpha=1.4$, $\varepsilon=0.1$, $N=100$, $M=1000$, $T=500$)



(i) $\mu=0.6$



(ii) $\mu=0.9$



(iii) $\mu=1.0$

Figure 32 (b)
Log of GNP Time-Series as the Percentage of 'Sedentary' Agents Increases: Some Examples
($\lambda=1$, $\pi=1$, $\rho=0$, $\varphi=0.5$, $\alpha=1.4$, $\varepsilon=0.1$, $N=100$, $M=1000$, $T=500$)

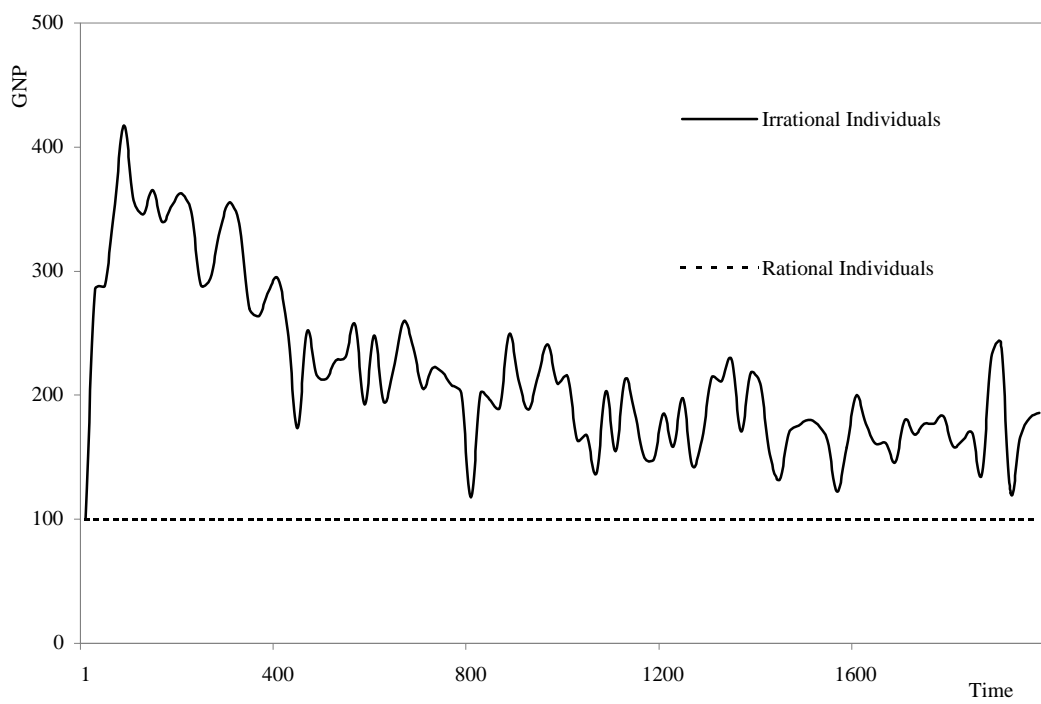


Figure 33
 Individual vs. Collective Rationality: A Simple Example
 Parameter Setup: $s^*=100$, $N=100$, $\varepsilon=0.05$, $\varphi=0$, $\lambda=5$, $\pi=0.15$, $\rho=\infty$, $\alpha=1$