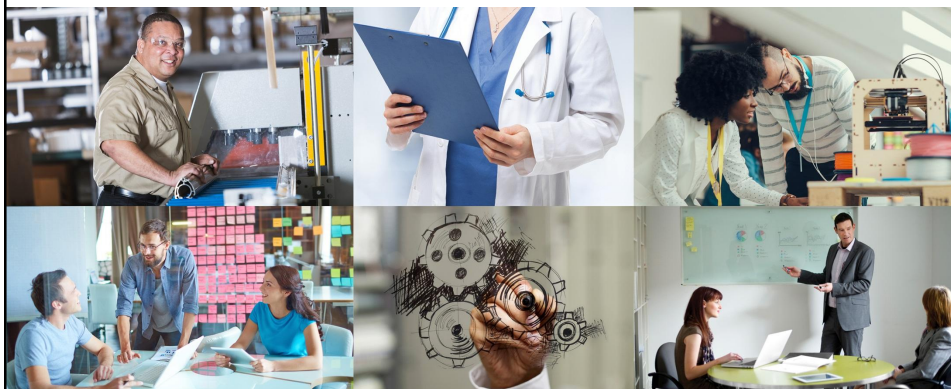


Preparing for the Economic Unknown



May 27, 2020/Greg Evans, PhD

All views expressed are my own, not those of any other organization with which I am associated.



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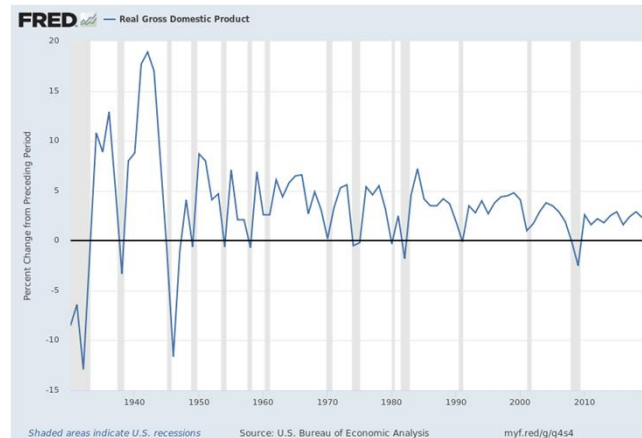
Topics

- Past Recessions
 - GDP and Output
 - Employment
 - Prices
- Enduring Effects
 - Government Intervention
 - Long-Run Pandemic Effects
 - Working from Home



2

GDP Growth



IMEC

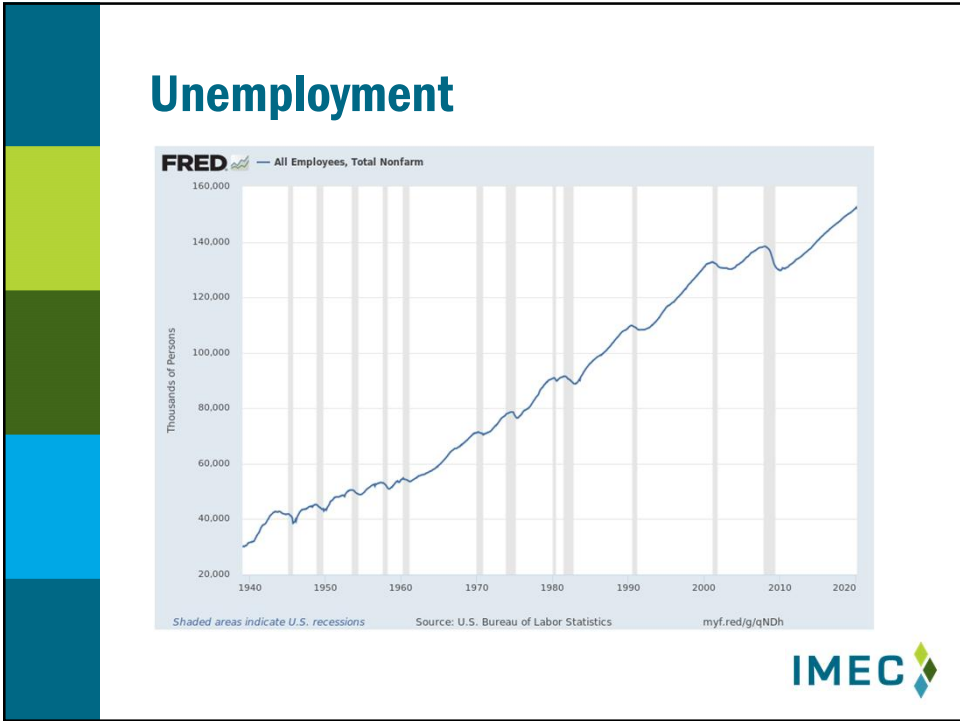
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GDP Growth

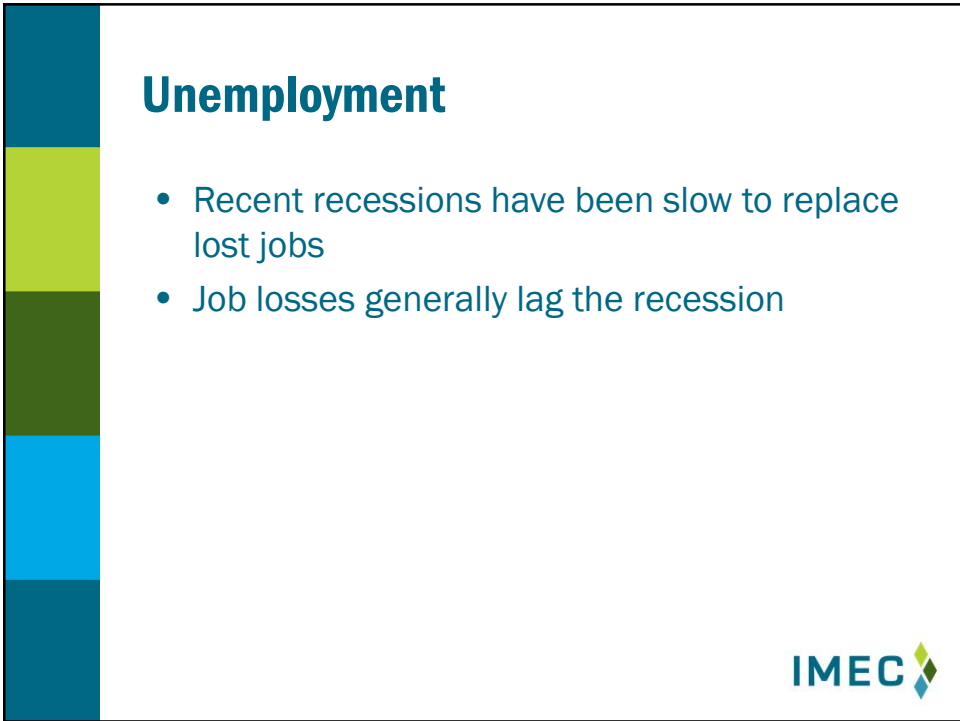
- Quite mild since the Great Depression
- Recent recoveries have not returned to the pre-recession rate of growth
 - Not much “bounce back”
- Will that change this time?
 - Maybe
 - From a shutting down and starting back up perspective, the bounce back could be huge
 - But reopening appears to be going very slowly

IMEC

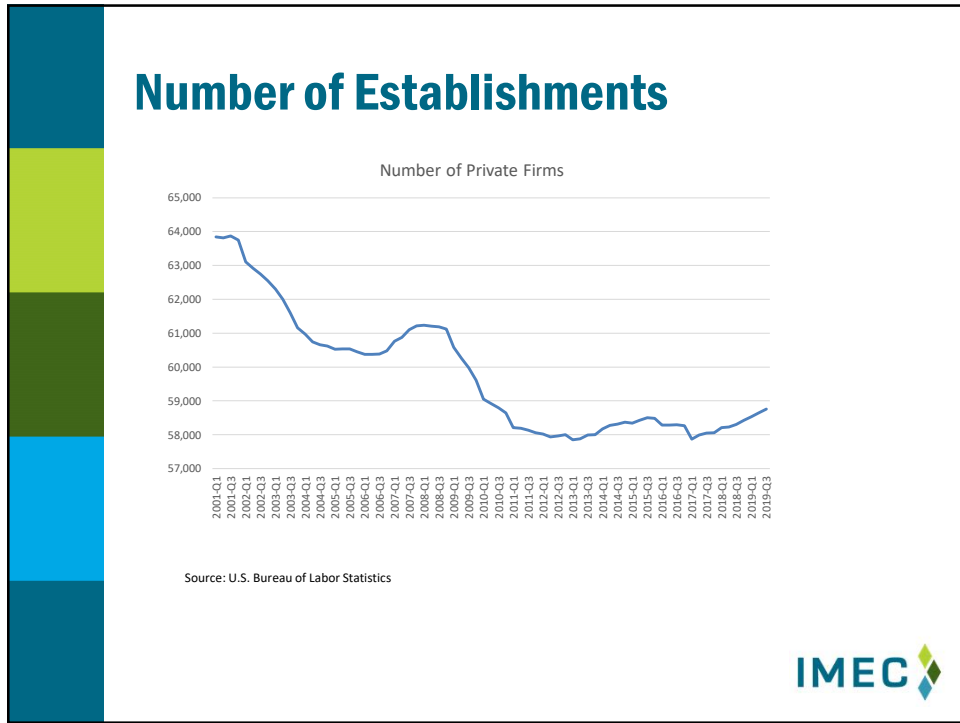
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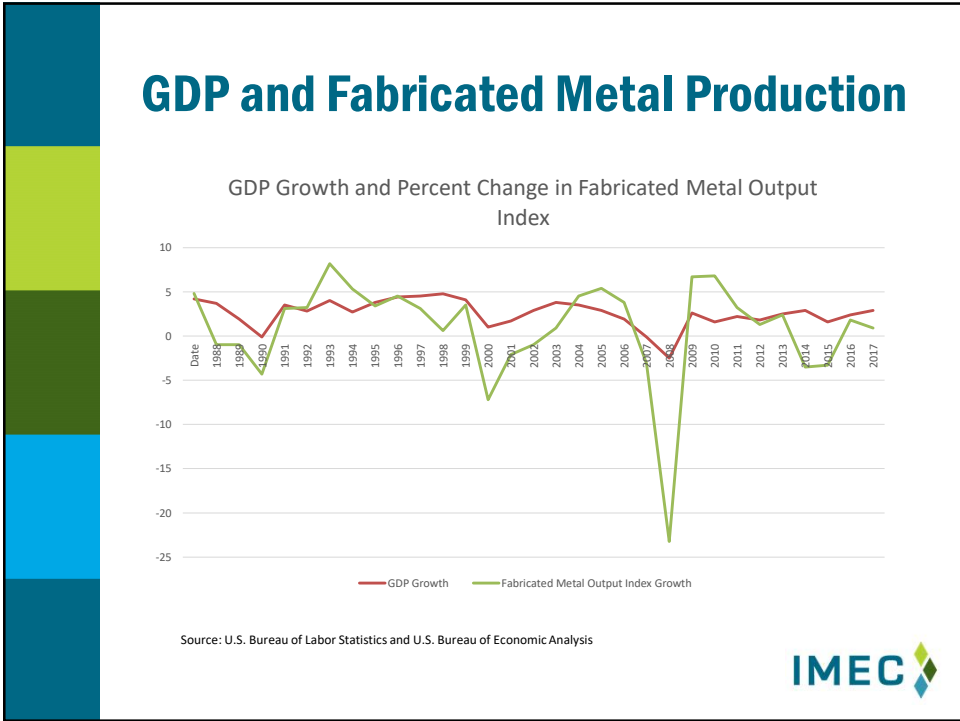
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Number of Establishments

- Steady downward trend that had turned upward recently
- Downward spike in the last recession came toward the end of the recession




8



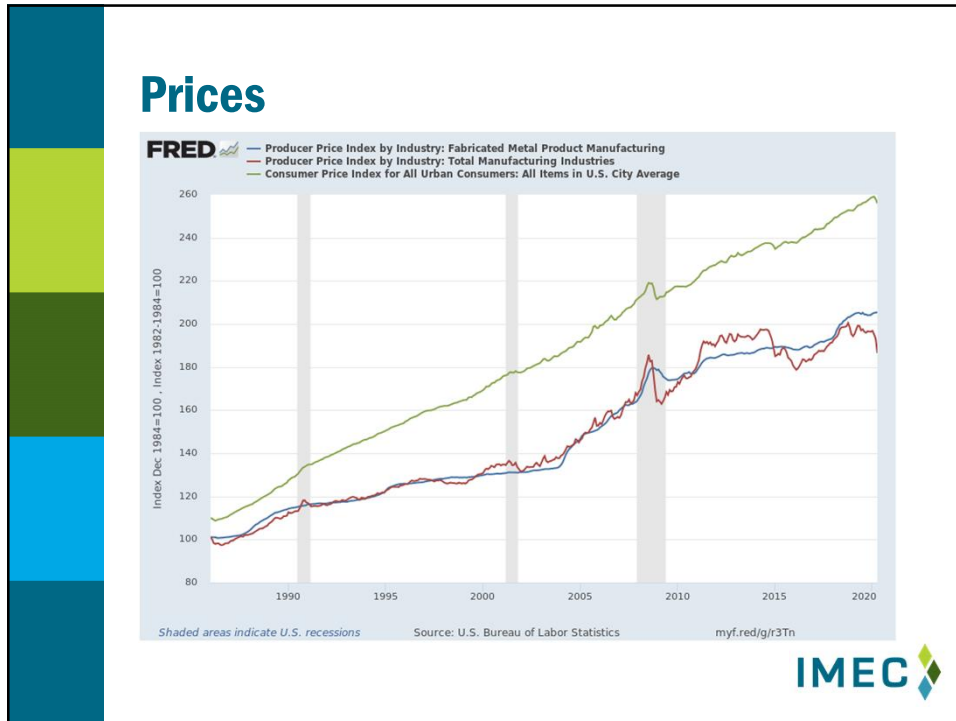
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GDP and Fabricated Metal Output

- Output in fabricated metal tracks the economy, but with considerably stronger spikes
 - A 1 percentage point change in GDP leads to a 2.7 percentage point change in the fabricated metal output index



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Prices

- What happened in April?
 - *Fabricated Metals were flat (204.8 in January to 205.3 in April)*
 - *Total Manufacturing dropped from (196.8 in January down to 186.5 in April)*
- Consumer Price Index has peaked in February
- In Illinois, it peaked in January



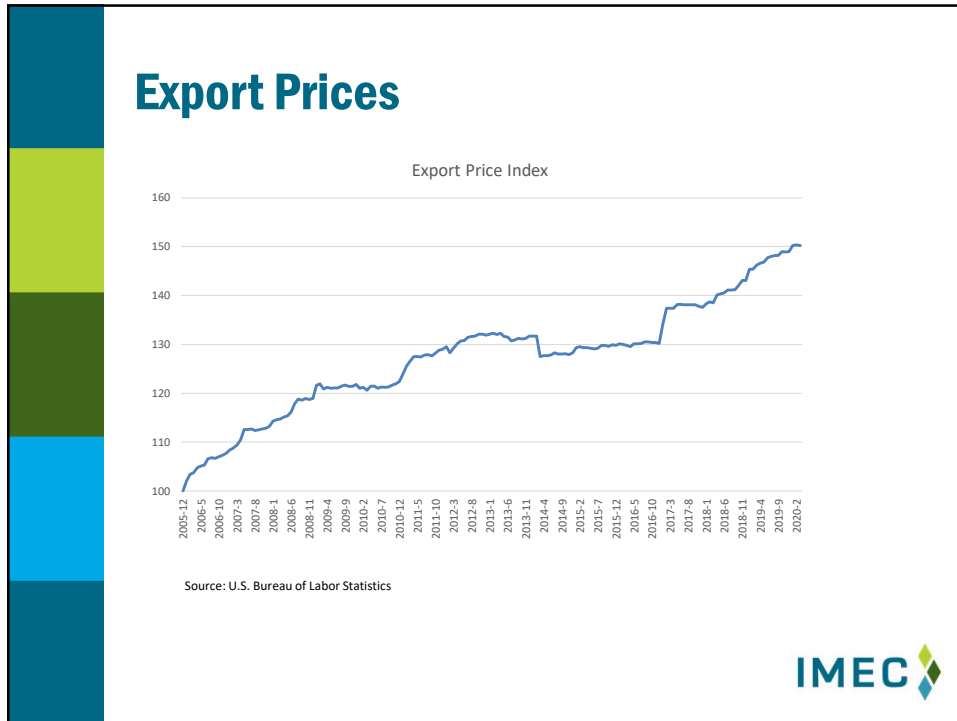
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Prices

- The drops in Consumer Price Index and Producer Price Index suggest either demand is holding in fabricated metals or supply is decreasing
 - *Could be a lag in the data as it is still preliminary*




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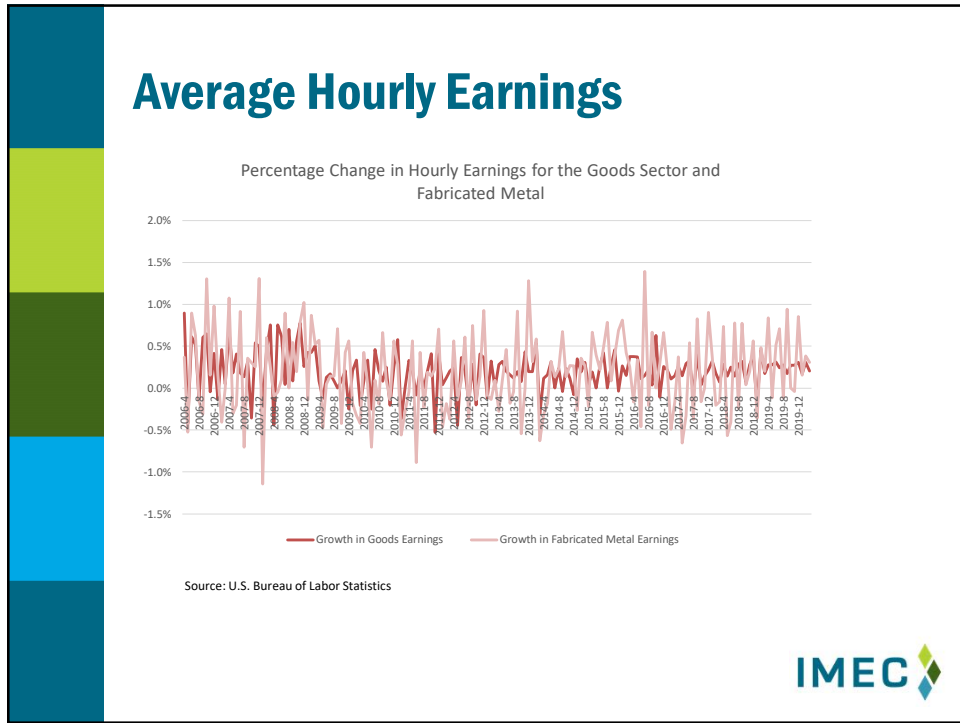
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Export Prices

- Steady incline
- Recessions seem to pause the incline, but do not cause a decline
- What happened in April?
 - Slight decrease from March (preliminary) from 150.1 down to 149.7
 - Import prices are largely flat (an uptick since March, but that saw a decrease from February)



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Average Hourly Earnings

- Changes in Hourly Earnings in Fabricated Metals have not been particularly correlated with changes in Hourly Earnings in the Goods producing sector in general
 - *A 1 percentage point increase in wages in the Goods Producing Market leads to an about an 0.67 percentage point increase in wages in the Fabricated Metal Sector*

IMEC

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Average Hourly Earnings

- But the spikes in Hourly Earnings in Fabricated Metals are more pronounced
 - *Standard Deviation for Goods Sector is only 0.33 compared to 0.52 for the Fabricated Metal*
- What happened in April?
 - *Actually increased (preliminary) from 26.23 to 26.79*
 - *Continuing a steady upward trend*



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Enduring Effects

- GDP is a flow, if the flow can get restarted, there does not need to be lasting damage
 - *Imagine calculating your change in output from Christmas Eve to Christmas Day, then from Christmas Day to December 26th*
 - *In fact, the quarter-over-quarter numbers could be huge*



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Enduring Effects

- Demand Recession versus Supply Recession
 - *Government intervention is almost exclusively targeted at stimulating demand*
 - *If it is a demand recession, normal government intervention won't help – you can't stimulate demand if people can't leave their house*
 - *But attempts to stimulate demand feedback negatively into supply*
 - *What happens when you pay people to be unemployed?*
 - *Also, government willingness to close businesses is going to have a hangover effect on business*



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Enduring Effects

- Past pandemics show effects linger for decades (Jorda, Singh, & Taylor, 2020)
 - *Labor scarcity & increased precautionary savings*
 - *That labor scarcity can have a positive effect on per capita income (Brainerd & Siegler, 2003)*
 - *Big difference with current pandemic is the age group affected*



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Enduring Effects

- Other Likely Changes to the Economy/Society
 - *Knowledge spillovers versus decreased commute time*
 - Workers with more education tend to prefer out-of-home work, while less educated workers prefer working (De Graaff, & Rietveld, 2007)
 - Working from home results in more productivity (Bloom, Liang, Roberts, & Ying, 2015)
 - This study looked at primarily call center style work



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Key Takeaways

- Output and earnings in fabricated metal likely to be more volatile than the economy as a whole
- Economic bounce back likely to be tempered by government intervention
- Pandemics tend to increase incomes as labor decreases, but unlikely with present pandemic
- Likely be at least shift involving more remote work



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Appendix – Regressions




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GDP and Output Index

Linear regression

	Number of obs = 31
	F(1, 29) = 10.93
	Prob > F = 0.0025
	R-squared = 0.5358
	Root MSE = 3.9882

	Robust					
output	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
gdp	2.712842	.8207401	3.31	0.003	1.03424	4.391444
_cons	-6.098583	2.498368	-2.44	0.021	-11.20832	-.9888464



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Average Hourly Earnings

Linear regression

Number of obs =	168
F(1, 166) =	23.56
Prob > F =	0.0000
R-squared =	0.1213
Root MSE =	.00451

	Robust				
	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
fab					
goods	.6656521	.1371253	4.85	0.000	.3949178 .9363864
_cons	.0005933	.0004517	1.31	0.191	-.0002986 .0014851



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Producer Price Index

Regression of PPI-Manufacturing versus PPI-Fabricated Metals

Source	SS	df	MS	Number of obs =	411
Model	418240.145	1	418240.145	F(1, 409) =	22306.17
Residual	7660.73836	409	18.7499715	Prob > F =	0.0000
Total	425908.883	410	1038.80215	R-squared =	0.9820
				Adj R-squared =	0.9820
				Root MSE =	4.3301

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
ppi_fab					
ppi_man	.9882401	.0066168	149.35	0.000	.9752329 1.001247
_cons	1.796103	1.003341	1.79	0.074	-.1762464 3.768453

Test of Coefficient Equal to 1
 F(1, 409) = 3.16
 Prob > F = 0.0763



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References

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- Jorda, O., Singh, S., & Taylor, A. (2020). Longer-run economic consequences of pandemics. NBER 2020-09.



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