# *ECON 113 — MIDTERM EXAMINATION #2* Questions

<u>PART I.</u>   Paired Identification (24 points total; 18 minutes total)

Choose **two** of the following **three** pairs of items. Define or identify each term in the pair (8 points). Then, briefly discuss the connection between the two terms (4 points). Each answer is worth 12 points total. You should spend about 9 minutes on each question.

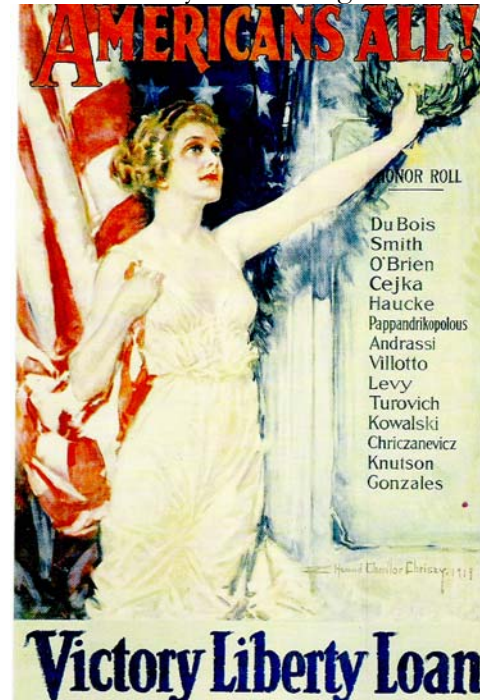1.   (a) Use of merchant credit by race, circa 1920

         (b)
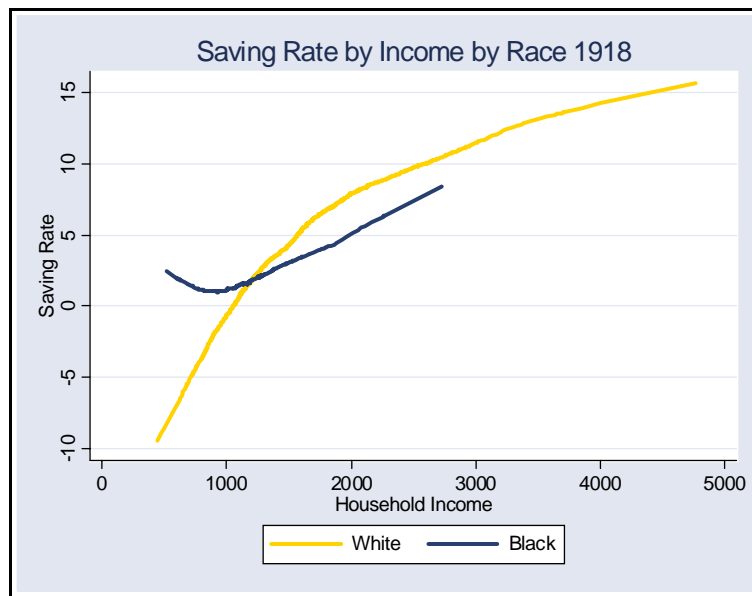
2.

(a)   When and why of this image: (b)   When and why of this image:

Answer this third question only if you have skipped one of the previous two.

Point allocation on this problem only: 3 points for (a), 3 points for (b), 6 points for connection

3.   (a) Direction of changes (increase? decrease?) in the capital-labor ratios over the late nineteenth
            century in manufacturing **and** in agriculture

       (b) Definition and Pattern of Farmers' Terms of Trade, as depicted in this table

| Farmers' Terms of Trade (1870 = 100)			
	Wholesale Farm Prices	Consumer Prices	Terms of Trade
1870	100	100	100
1880	71	76	94
1895	55	66	84
Source: Walton & Rockoff, Table 15-4			

PART II.   Table Identification (18 points total; 13 minutes total) **Answer all three questions.**

1.   What are the data in the table saying? (3 points) *Briefly*, what is the connection between the data in
        the last row of the table and southern income? (3 points)

Percentage Decline in Worker-Hours per Capita of Rural Black Population, 1870s vs. 1850s		
Source	low estimate	high estimate
participation rate	17	24
days / year	8	11
hours / day	9	10
Cumulative effect	28	37
Source: Ransom & Sutch, *One Kind of Freedom*, Table 3.3		

2.   What are the data in the graph saying? (2 points) What is an explanation for the pattern after World
        War I?(4 points)

Immigration from Europe, 1900-1970
Source: Historical Statistics, C90
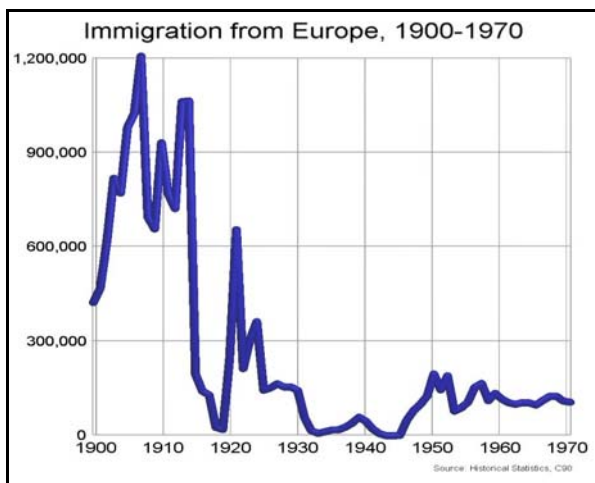
Part II, continued **(answer all questions in this part)**

3.   What are the data in the table saying about the role of farm distress in determining bank failures in
        Kansas in the 1920s? (3 points) What are the data in the table saying about the role of deposit
        insurance in determining bank failures? (3 points)

Determinants of Bank Failure (partial regression results) standard errors in parentheses	
independent variables	Results for counties with at least 5 banks, defining failure to include choosing to liquidate
%Δ value per acre of farmland & buildings	-0.41 (0.15)
% of state banks with deposit insurance	0.11 (0.06)
Source: Wheelock, "Regulation and Bank Failures," Table 2.	

Part III. Using Economic Models and Concepts to Explain Historical Events (36 points total; 27 minutes
total) **Answer all three questions.**

1.   (12 points) Use (and **briefly** explain) the Keynesian model of the macroeconomy to discuss any one
        explanation for the severity of the Great Depression.

2.   (12 points) Use (and **briefly** explain) the Monetarist model of the macroeconomy to discuss any
        one explanation for the severity of the Great Depression.

3.   (12 points) Using concepts from the Heckscher-Ohlin and Solow models, and the table below,
        explain why incomes in the Pacific Coast (PC) region and in the Mid-Atlantic (MA) region were
        above the national average in 1900.

Explaining differences in regional income, 1900			
	actual % difference between region & U.S. Y/L	% difference between region & U.S. Y/L when vary only. . .	
region		mix of output	wages
PC	53.3	9.2	33.6
MA	33.8	20.7	5.4
Source: Kim, "Economic Integration and Convergence," Table 1.			

PART IV. Short Essay Question (22 points total; 15 minutes total)
Answer **one** of the following **two** questions. The questions have the same introduction – and the same intro
as in midterm #1 – but differ. Base your answers on lecture, discussion section, **and** the assigned reading.
Complete answers will draw from all three sources.

1. (TOPICS: BANKING & EDUCATION) The
    Solow growth model is based on the production
    function $Y = A \cdot F(K, L)$. Economic historians
    often use the production function $Y = A \cdot F(K, L,$
    $T)$ instead.   There are two types of economic
    growth: extensive growth (increases in the
    quantities of inputs) and intensive growth
    (increases in productivity). The table at the right
    indicates the relative roles of extensive and
    intensive growth in U.S. economic history.

Sources of Economic Growth				
	Share attributable to . . .			
	Labor	capital	land	productivity
1840-1860	49	26	10	15
1870-1930	43	27	4	27
1940-1990	41	14	0	45
Source: Walton & Rockoff, Table 1-10.				

a. (10 points) The National Bank Acts of the 1860s
    provided intensive growth to the U.S. economy.
    What feature(s) of the National Bank Acts
    increased total factor productivity, A? Explain
    the history: what historical factors led to passage
    of the National Bank Acts? Explain the
    economics: how did passage of the National
    Bank Acts increase productivity?

b. (6 points) Increases in educational attainment
    also provided intensive growth to the U.S.
    economy. Describe the pattern of change in
    secondary (high school) enrollment and
    graduation rates, 1900-1935. Using the table at
    right, what role did immigration play in
    determining the variation between states in high
    school graduation rates in 1928? What roles did
    accumulation and distribution of wealth play?

c. (6 points) Consider this counterfactual: Suppose
    that instead of public funding, all secondary
    education in the early twentieth century had been
    privately funded by students and their parents.
    Use this counterfactual to speculate as to the
    effect of public funding of secondary education
    on economic growth. The concepts of public
    goods and/or positive externalities should be
    part of your answer.

Determinants of High School Graduation Rates, 1928 (standard errors in parentheses)	
log per capita wealth	0.852 (0.37)
% population ≥ 65 yrs old	1.423 (0.79)
% labor force in manufacturing	-0.144 (0.097)
% population Catholic	-0.377 (0.09)
Auto registrations per capita	0.0568 (0.02)
South (0/1 dummy variable)	-0.0935 (0.03)
New England (0/1 dummy variable)	0.100 (0.03)
Constant	-0.468 (0.27)
R^2	0.874
n	48
Source: Goldin & Katz, "Human Capital and Social Capital," Table 1.	

2. (TOPICS: BUSINESS ORGANIZATION & HEALTH) The Solow growth model is based on the production function $Y = A \cdot F(K, L)$. Economic historians often use the production function $Y = A \cdot F(K, L, T)$ instead.   There are two types of economic growth: <u>extensive growth</u> (increases in the quantities of inputs) and <u>intensive growth</u> (increases in productivity). The table at the right indicates the relative roles of extensive and intensive growth in U.S. economic history.

Sources of Economic Growth				
	Share attributable to . . .			
	Labor	capital	land	productivity
1840-1860	49	26	10	15
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1940-1990	41	14	0	45

Source: Walton & Rockoff, Table 1-10.

a. (10 points) The Merger (or, Concentration) Movement of the late nineteenth century provided <u>intensive growth</u> to the U.S. economy insofar as companies exploited economies of scale. What was "the Merger Movement"? Explain the <u>history</u>: what historical factors led to the desire of firms to merge? Explain the <u>economics</u>: what are "economies of scale" and how does their exploitation increase total factor productivity, A?

Determinants of Typhoid Rate Partial Regression Results (standard errors in parentheses)			
	Black	White	Black - White
Public Water Company? (1 if yes; 0 if private)	–15.4 (6.5)	–3.6 (2.8)	–13.5 (4.0)
% Population Black	4.39 (2.06)	1.73 (1.23)	2.67 (2.13)
% Population Foreign Born	-1.71 (2.68)	-3.62 (1.97)	1.09 (3.25)
# cities	61	61	61

Source: Troesken, "Race, Disease, and the Provision of Water," Table 2.

b. (6 points) Improvements in health also provided <u>intensive growth</u> to the U.S economy. Describe the pattern of change in typhoid rates in the United States, 1900-1940. Using the table at right, what role did public provision of water play in determining the variation between cities in racial differences in typhoid rates?   Why did Troesken (the author) consider this result surprising?

c. (6 points) Consider this counterfactual: Suppose that instead of public funding, all water and sewer systems in the early twentieth century had been privately funded by users. Use this counterfactual to speculate as to the effect of public funding of water and sewage systems on economic growth. The concepts of public goods and/or positive externalities should be part of your answer.