

The Great Depression as an Energy Transition: Intersection with Keynesian and Monetarist Interpretations

(Proposal for EHA 2024 conference)

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Abstract

The energy transition hypothesis suggests that the Great Crash of 1929 was triggered by major oil price cuts and declaration of oil supply certainty following discovery of new oil fields in the US Southwest; and the Great Depression that followed involved breaking the hegemonic power of US railroads. In reviewing intersections of this hypothesis with established Keynesian and Monetarist perspectives on the Depression, we see that Robbins and to lesser extent Keynes came close to recognizing the role of energy transformation and technological change. The energy transition can also potentially explain a missing element in the Monetarist's interpretation of the Depression noted by Gordon & Wilcox, and others. Further economic analysis of the Depression should at a minimum assess the impacts of: i) the collapse of railroad investments due to technological change; and ii) the decline in crude oil prices.

1. Introduction

Understanding the Great Depression is, according to Bernanke (2000, p.6), "*the Holy Grail of macroeconomics.*" The Depression was so central to the development of macroeconomics, that the two dominant economic paradigms of the twentieth century – Keynesianism and Monetarism – both sought to explain its proceedings (e.g., Friedman & Schwartz, 1963; Kindleberger, 1973; Temin, 1976; Brunner, 1981). Recent analysis, supported by historical evidence, has produced a new hypothesis that the Great Depression was tied to the socio-technological transformation from coal to oil-based transportation in the US (

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energy transition hypothesis is able to explain both the Great Crash of 1929, and the proceeding Great Depression as being features of the transition from coal to oil-based transportation. Underlying the Great Depression was a major reduction in oil prices and announcement of oil supply certainty, following discovery of new oil fields in the US Southwest in 1929. The Depression that followed was long and drawn-out and involved breaking the hegemonic power of US railroads.

and the genesis of the Great Crash it is necessary to recognize that the US had serious concerns over oil scarcity throughout the 1920s. In 1922, the US Geological Survey reported that known US oil reserves could only last for 18 to 20 more years (US Geological Survey, 1922; Dennis, 1985). Furthermore, there was little discovery of new oil fields in the early 1920s (see Figure 3 in Kennedy, 2023a). President Harding was so concerned over oil scarcity – for military and industry reasons – that he created a National Oil Conservation Board (FOCB) in 1924. Acting in response to the FOCB, in 1925, the American

Petroleum Institute (API) published a report claiming that petroleum reserves were almost inexhaustible (API, 1925; Dennis, 1985). The API report, however, was not taken seriously by state geologists (Dennis, 1985) and in 1926, the FOCB released its first report indicating that existing oil wells only had a capacity of about six years of supply. There was a moderate increase in known oil reserves in 1927, but the FOCB's second report, published in 1928, still bolstered the public perception that the US was running out of oil (Olien & Olien, 1993). Moreover, throughout the 1920s, oil companies built up stocks of crude petroleum as a hedge against possible shortages.

Concerns over oil scarcity were dramatically expunged, however, in 1929, with the discovery of huge new oil fields in the US Southwest. Kemp (2015) noted "

Figure 1. Headlines from the *New York Times* pertaining to the petroleum industry at the time of the Great Crash. Cuts in Californian oil prices, averaging 55%, were reported on October 22 – two days before Black Thursday. An announcement that future supplies of oil were no longer uncertain, and thus a policy on storage could be reversed, was made on October 29 – Black Tuesday.

4. Keynesian Perspectives on the Great Depression

Skiddelsky (1996) notes that Keynes made negligible reference to the Great Depression in his *General Theory* – so we have to look to Keynes' other writings and those of other Keynesians to glean their interpretation of the Depression. The paper provides a full review of Keynes' discussion of the Depression in his *Collected Works*.

A question of central interest in the paper is to what extent did Keynes recognize the energy transition, or technological change, in his understanding of how the Depression occurred? There are a few notable places where Keynes partially recognizes the role of technological change. In *The Future of the Role of Interest: Proposals for the Bond Market* (September 1930) Keynes muses over possible deeper, long-term factors underlying the Depression. He states (Keynes, Vol 20, p.391):

"Without a doubt, the Wall Street slump, and what I should prefer to call unbalanced production, have played a part. But I believe that the economic historians of the future will, when they seek for an explanation, look somewhat deeper and find the ultimate cause in a series of events which have been spread over the whole of the post-War period. Let me explain, therefore, what appears to me to be, if not the root cause of what is happening, at least one of the root causes.

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