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The Incentive Reward Complex and the slowest U.S. post-WW II recovery on record¹

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Abstract: Government policymakers (both Fed and U.S. Treasury) remain puzzled over the lack of vigor in the post-Great Recession recovery of 2010 to 2017, blaming it in part on a slowdown in productivity growth and the retirement of workers. But an equally plausible explanation lies in their failure to recognize the importance of the Incentive Reward Complex in providing an improved springboard for economic growth. Support for this hypothesis lies in the Fed's data base, along with evidence that fails to support stimulus policies of both the U.S. Treasury and the Fed. Rather than more of these types of government interventions, we may need fewer of them along with more of the culture of incentives and rewards.

Keywords: real gross private investment, productivity growth, incentive reward complex, risk-adjusted return, value of opportunity, and fiscal and monetary policies.

JEL codes: E22, E62, E52, E63.

Introduction

U.S. monetary and fiscal policy experiences of the past decade afford an opportunity for another test of generally accepted stimulus policies. Instead of the belief that stimulus spending, whether Keynesian or monetarist in origin, is sufficient for robust growth in private investment, we propose another hypothesis: in a free market investment growth is prompted more by incentives and rewards to providers of capital, including the minimizing of compliance costs of government interventions, than currently accepted stimulus policies.

We find evidence in support of the prediction that, because of policy makers' relative inattention to incentives and rewards to capital providers, the recovery

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of private investment and hence Gross Domestic Product (GDP) growth was bound to be slow. This observation is not new. Concern over the speed of the overall recovery has been suggested by Martin Feldstein (2013), John Taylor (2016), and Robert Gordon (2016). Even op-ed writers of the leading media have echoed these fears (Wall Street Journal, *passim* 2015–2016). Indeed, renewed vigor in private investment spending has been inordinately *delayed* during this recovery. This is shown by comparing the Great Recession's (GR) investment recovery to its recovery pace during the immediately previous recession.

Thus generally accepted stimulus policies lack the predictive power desired by many. Something is very wrong. We suggest an added policy, not necessarily as a replacement but as an additional tool: policy makers should be more aware of incentives and rewards for capital providers. They should create a climate, an environmental setting, a culture in which these incentives and rewards may flourish. We label this atmosphere the Incentive Reward Complex (IRC).

Our hypothesis implies that the political climate of escalating corporate taxes (both rates and scope) combined with an unprecedented acceleration of regulatory policies (Batkins, 2016) along with constant political threats to increase them, constituted monkey wrenches thwarting the efficient functioning of free markets.

In a capitalist, free competitive market, private investment flourishes only when the IRC, the crucial driver of economic activity and expansion, is allowed adequate opportunity to enable reward seekers to earn risk-adjusted rewards sufficient to prompt sacrifices of personal consumption necessary for robust real investment. In other words, to bring forth incentives for risk-capital investors, in particular, to engage in investment spending that is expected to earn adequate risk-adjusted rewards.

The paper is structured as follows. The first sections outlines the concept of Incentive Reward Complex. Section two deals with investment incentives. The third section presents details of the hypothesis. Section four focuses on the importance of IRC. The paper closes with conclusions.

1. The Incentive Reward Complex

The IRC refers to a milieu of environmental conditions, a setting and a culture that influences its citizen's investment incentives. Being a culture, it is a collection of ethical principles, unwritten laws, beliefs, customs and traditions. Taxes and regulatory costs, both direct and compliant, bear negatively on incentives. To the extent policy makers can influence the IRC; they would encourage investment rewards by minimizing taxes and regulatory costs.

It must not be confused with supply-side economics. The latter emphasizes curtailing taxes and government regulatory policies; the IRC embraces all

such possible impediments to investment spending, whether of federal or local origin, including those implied by foreign treaties, plus others. Supply-side investment prescriptions are consistent with a vigorous IRC policy. It is not only current taxing and regulatory power that adversely affects the IRC; the threat of future taxes and new regulations can also have a deterrent influence on investment, as exemplified by President Obama's warnings.

2. Investment incentives

A proper IRC is powerfully linked to new business investments. Indeed, John Maynard Keynes (1936) early identified private investment as constituting high-powered dollars that propel energy from new investment into increases in GDP. This message was echoed by Alvin Hansen (1941), Dale Jorgenson (1962), John Meyer and Edwin Kuh (1957), and a growing number of others. But rising disincentives to engage in investment spending induced, in part, by government interventions have been given short shrift by policy makers. Failure to become aware of these disincentives was, we repeat, a dominant factor in prolonging the recent recovery.

Because the IRC is so important at firm levels, a plethora of capital-budgeting decision-making procedures exist (Bierman & Smidt, 1964). The aim is to balance risks of proposed ventures against expected returns. Overwhelming evidence shows that entrepreneurs are very sensitive to investment risks. When they are formidable, proposed ventures may be abandoned despite the attractiveness of their expected rates of return.

3. The hypothesis

Our hypothesis continues the tradition of assuming that a real structure underpins the economy, "as if" it were a driving force established by the deity, as it were; that it is the duty of economists to derive its observable predictions and compare them with the evidence. The concept "as if" is forever enshrined by Armen Alchian (1950). The National Bureau of Economic Research (NBER) has noted the recovery in investment spending from the Great Recession of 2007–2009 has been the slowest on record for post World War II recoveries since 1980. The (NBER) has validated extension of the statement back to the end of WW-II.

If our hypothesis is valid, a smallish, sluggish investment outcome should be seen in comparing annual private investment in the recovery starting with the year 2010, with the investment pattern in the recovery following the preceding recession of 2001, called the reference recession.

3.1. Discussion

Using the NBER determinations of recession peaks and troughs, the GR began December, 2007 and ended June, 2009, a period of 18 months (NBER, 2010). Looking at the immediately preceding recession of 2001, the reference recession corresponding to the GR, the NBER dates its slowdown as beginning 2001, Q1. It lasted 8 months. Using NBER assessments, the recovery period of the 2007–2009 recession starts at January, 2010.

A direct comparison of GR recovery investment with its reference recession is afforded by examining the history of U.S. quarterly investment spending. This annualized series is provided by the Federal Reserve Bank of Saint Louis as quarterly Real Gross Private Investment spending (see Table 1) Since we are comparing magnitudes, it is reasonable to match the GR's first quarter of recovery investment output with the first quarter of its reference recession,

Table 1. Real Gross Private Investment. Quarterly, seasonally adjusted, annual rate, billions of chained 2009 dollars. Comparative approach applied to Great Recession 2007–2009

Identity of recovery quarter, Great Recession	Identity of recovery quarter, reference recession	Recovery investment, Great Recession	Recovery investment, reference recession	Differences, col. (4) minus col. (3)
Col. (1)	Col. (2)	Col. (3)	Col. (4)	Col. (5)
2009, Q3	2002, Q1	1949.6	2224.9	275.3
2009, Q4	2002, Q2	2012.9	2224.6	211.7
2010, Q1	2002, Q3	2116.9	2220.7	103.8
2010, Q2	2002, Q4	2185.7	2239.5	53.8
2010, Q3	2003, Q1	2166.1	2251.3	85.2
2010, Q4	2003, Q2	2125.9	2330.9	205.0
2011, Q1	2003, Q3	2208.0	2413.1	205.1
2011, Q2	2003, Q4	2214.0	2414.5	200.5
2011, Q3	2004, Q1	2373.7	2500.9	127.2
2011, Q4	2004, Q2	2429.6	2539.4	50.3
2012, Q1	2004, Q3	2489.1	2590.6	101.5
2012, Q2	2004, Q4	2482.0	2664.4	182.4
2012, Q3	2005, Q1	2462.2	2630.5	168.3
2012, Q4	2005, Q2	2505.1	2657.9	152.0

Source: Federal Reserve Bank of Saint Louis (2016).

i.e., 2002's quarter 1's investment, with the first quarter of the preceding recession's recovery, denoted as 2009, Q3. When the investment output at 2009, Q3 is subtracted from its corresponding reference recession metric at 2002, Q1; the difference is shown in Table 1, column (5). A positive sign for this difference indicates that investment output for that period has failed to reach its reference recession performance for the corresponding period. Following the same procedure, the balance of column (5) entries is determined.

Looking at column (5), the first entry is positive, implying a less than full-recovery performance for the Great Recession's first-recovery quarter. And all other values are likewise positive, suggesting that the economy was not performing well **relative** to the previous recession recovery.

3.1.1. Caveats

Several qualifications should be noted. There is a scale bias in comparing the 2010–2014 recovery with the period beginning at 2002, Q1 and up. The real economy was larger in the former than in the latter interval, thus putting an upward bias to the recovery investment series. Hence, the recovery performance of the economy was poorer than appears. Second, the quarter 2009, Q3 was the first quarter after the most severe recession following World War II (WW II). This downward pressure on 2009, Q3's investment metric relative to the investment outcome at 2002, Q1, biased upward the rate of change for the quarter 2002, Q1, tending to give an unusually vigorous first quarter-recovery response. Third, what effect did "crony capitalism" have upon investment spending in the recovery? Let alone that policy maker preferences for grants, subsidies, and other forms of private investment aid can be inconsistent with free-market, competitive capitalism, it translates into real private investment and hence provides another source of upward bias to the real investment series.

3.1.2. Comparison with the second most severe recession

The next-most-severe post-War-II recession as given by the NBER's measure of duration, is the 1982 slowdown, and its reference recession is the 1980 recession. Is the investment recovery behavior of the 2010–2014 interval as compared to its reference recession unique, or is a similar comparison of the next-most-severe post-War-II recession, compared with its reference recession merited? Put in another way, does a similar comparison between the second-most-severe recession to its reference recession give the same, or different results? Outcomes of this effort are displayed in Table 2.

The NBER takes the month of July, 1982 as the next-most-severe recession's start, and November, 1983 its end, a total of 16 months. The quarter 1983, Q1 was taken as the start of this recession's recovery. The reference recession, for this purpose would be the decline that began in January, 1980, and ended in July, 1980. This information translates into a first-quarter recovery for the reference as beginning calendar 1980, Q4.

Table 2. Real Gross Private Investment Quarterly, seasonally adjusted, annual rate, billions of chained 2009 dollars. Comparative approach, Second most severe recession, 1981

Identity of recovery quarter, second most severe, reference recession	Identity of recovery quarter, second most severe, recovery quarter	Amount of recovery investment, second most severe	Amount of recovery investment, second most severe, reference recession	Differences, col. (4) minus col. (3)
Col. (1)	Col. (2)	Col. (3)	Col. (4)	Col. (5)
1981, Q4	1983, Q1	854.9	879.1	24.2
1982, Q1	1983, Q2	853.8	934.2	80.4
1982, Q2	1983, Q3	845.7	1025.1	179.4
1982, Q3	1983, Q4	780.3	1124.2	343.9
1982, Q4	1984, Q1	807.5	1160.7	353.2
1983, Q1	1984, Q2	879.1	1185.8	306.7
1983, Q2	1984, Q3	934.2	1170.4	236.2
1983, Q3	1984, Q4	1025.1	1138.3	113.2
1983, Q4	1985, Q1	1124.2	1157.7	33.5
1984, Q1	1985, Q2	1160.7	1149.8	-10.9
1984, Q2	1985, Q3	1185.8	1192.2	33.4
1984, Q3	1985, Q4	1170.4	1191.9	21.5
1984, Q4	1986, Q1	1138.3	1171.0	32.7
1985, Q1	1986, Q2	1157.7	1139.5	-18.2

Source: Federal Reserve Bank of Saint Louis (2016).

Table 2 displays in column (5), matched differences analogous to those of Table 1, column (5). Except for the notable response in investment spending provided by supply-side policy makers, compared to the GR the aggregate behavior of Table 2's column (5) is similar to the pattern of Table 1, column (5) (recall that the Reagan administration early recognized the importance of supply-side economics.)

The following observation is significant: Table 2's responses appear stronger than those in Table 1, despite the fact that both sets are subject to scale bias. Table 2 demonstrates that the earliest quarter investment spending returns to its pre-recession magnitude was 1984, Q1, the tenth quarter of the recovery. In the GR, however, this level of spending is never reached over the first four-

year (48 months) recovery span. In fact, annual investment in the GR's recovery does not match its reference recession's magnitude until 2015.

The earlier investment response observed in Table 2 could have been due to the Reagan thrust, while in contrast Table 1's depressive effect is consistent with Bush-Obama policy makers paying less attention to the IRC in the GR. This depressive investment effect was, as noted by a surge of economic observers, converted into weak GDP growth, a phenomenon which reinforces Feldstein's conclusion the GR provides the slowest recovery from any recession since WW II. In contrast, Reagan policies were consistent with an effective IRC, and hence it is not surprising that they showed a stronger pattern of investment during the second recession's recovery.

3.2. Rationale for recent policies

The Fed's historically low interest-rate policy in conjunction with a vast quantitative easing has produced a swelling of Federal Reserve Credit. Through the wealth effect stock price increases were to be transmitted into increased consumption and thence into investment. Deficit spending was to have a similar effect by following the same path.

However, the widely accepted Keynesian nexus of consumption to investment spending, which reflects the operation of the multiplier, failed to produce its predicted vigorous recovery. The multipliers were to transmit the forces of added consumption into accelerated investment spending. Eloquently capturing the overall spirit was Paul Samuelson (2009) when he said: "Everyone understands now [...] there can be no solution without government. The Keynesian idea is once again accepted that fiscal policy and deficit spending has [sic] a major role to play in guiding a market economy. I wish that Friedman were still alive so that he could witness how his extremism led to the defeat of his own ideas." Of course, Samuelson's critics could answer that they wish he were alive to see what his favored policies have wrought.

4. Importance of IRC

Notable is Paul Krugman (2015) after recognizing that multiplier estimates averaged about 1.5, did not find these magnitudes inadequate for giving investment spending a solid boost. But they did fail, quite seriously. To repeat: something is wrong. However, the overall evidence leads us to conclude that during the GR the multiplier-stimulus process failed primarily because policy makers did not recognize the importance of the IRC in driving free markets. Decision-makers were behaving contrary to expectations of policy makers. They, by taking IRC mainly for granted, or ignoring it and taking actions inconsistent with it was, and continues to be, a costly mistake. The cumulative

foregone GDP over the recovery period must be, as a conservative estimate, in the trillions of dollars.

Finally, the most important criticism of our conclusions is by Carman Rinehart and Kenneth Rogoff (2009) who, based on a sweeping, multi-country, eight-century data base, suggest that all recessions linked to a financial crisis have longer than normal periods of recovery and, therefore our finding is not unusual. However, Robert Barro and Tao Jin (2016), in a study which also casts a broad net, raise severe doubt on this major conclusion. On the contrary, they find that declines in GDP are linked with quick recoveries, despite the fact that many of their severe downturns were associated with financial crises. Moreover, the severity of the GR has to be compared to the crisis emanating from the 1982 recession, which was linked with the end of one of the most inflationary episodes in post Civil War U.S. history.

Conclusions

Our study offers four contributions: first, an independent empirical approach has shown that the GR recovery was a long 60 months, consistent with the prediction that policy-maker investment-inhibiting policies would yield a slow investment recovery; to this extent, our findings support Feldstein's (2013) conclusion that this was the slowest post-WW-II recovery on record. Second, by contrasting investment performance after the next worst recession, post WW II, with the GR recovery, the evidence supports the notion that a policy more sensitive to investment rewards would produce faster recession recoveries; i.e., when policy makers respect the IRC, as in, for example, the Reagan recession, recovery of investment spending tends to be markedly faster than when the IRC is not heeded, as during the GR. Third, in many respects our comparisons presented conditions for an important, if not a crucial test: a decade of policy maker actions violating the IRC; avid political support of record stimulus spending; and of disappointingly low levels of private investment spending. Fourth, the concept of an environmental setting conducive to a robust recovery, in turn, tends to stimulate investment spending, could be brought to the attention of policy makers who should consider adopting it as a tool to hasten future recession recoveries.

A more effective IRC policy also can be considered for continual operations. Although suggestive, strictly speaking policy implications of the current study limit its application to recession post-recovery periods. Extension of its application has potential merit but requires further study. Economists might re-think, however, of the logical connection between consumption, investment and GDP, or whenever the expression "ripple effect" is applied. The multipliers subsume too much we do not clearly understand. A similar objection applies to monetarism where a more detailed skeleton of how monetarism performs its magic

would be helpful. We tend to rely too much on intuition in our explanations of key, fundamental relationships. Finally, at the risk of over-emphasis, the IRC deserves more attention by economists and policy makers.

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