Capital switching and the built environment: United States, 1970–89

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Abstract. In this paper, a ‘weak’ test of the capital-switching argument developed by David Harvey is offered. With data on construction investment activity for the USA and on various alternative investments, a temporal analysis was used to assess whether evidence exists for the movement of capital from the primary to the secondary circuit. The investigation is focused specifically on the building boom of the 1980s, as that expansion has been the focus of recent theoretical and empirical work centered on the relation between urbanization and the restructuring of capital. Little support was found for the claim that capital switching has occurred, but the data do point to a delinking of real-estate investment from nonspeculative investment criteria and use-value considerations.

1 Introduction
During the 1980s, the United States experienced a building boom unparalleled in the postwar era. The value of new construction, in constant dollars, invested each year between 1980 and 1989 was 22% higher than it had been in the 1970s, and almost 56% greater than during the 1960s.\(^1\) By 1990, the boom clearly had ended, and numerous commentators focused not on the bounty of real-estate investment opportunities but on the various symptoms of speculative fever: a glut of office space, a plethora of foreclosed loans, the collapse of savings-and-loan associations, the bankruptcy of small developers, and the tightening of bank-lending criteria (Hughes and Sternlieb, 1990; Reinhold, 1989; Uchitelle, 1990; Warner, 1989).

More central to the objectives of this paper, the construction boom of the 1980s and the subsequent collapse represents an opportunity to explore the flow of capital into the built environment and the function that this phenomenon plays in the overall dynamics of the capitalist economy. Some theorists, mainly economists, have looked at the mobility of capital within and through the sphere of production and have found a hypermobility, a concern with making profits by financial means rather than by producing useful goods and services (Bluestone and Harrison, 1982, pages 140–164; Phillips, 1990; Reich, 1983, pages 109–118; 1989). Other theorists, mainly urban political economists, have been more interested in the emergence of real estate as a prime target for capital investment and the degree to which this represents a qualitative shift of capital away from productive industrial activities to speculative real-estate investments. Overall, however, relatively little empirical documentation of these latter relationships has been produced.

Without doubt, these are important issues both practically and theoretically. A shift of capital into a different mix of industrial sectors has long-term implications for the international competitiveness of the United States in an increasingly globalized economy and has profound short-term and personal implications involving employment opportunities and income distributions. Theoretically, a movement of

\(^1\) From 1980 to 1989, $995.4 billion was invested in new construction, in 1958 dollars, compared with $817.3 billion between 1970 and 1979 and $638.4 billion between 1960 and 1969 (USDCa, various months).
capital into the built environment not only raises numerous issues as regards the role of real-estate investment in capitalism's constant 'creative destruction' but also has serious spatial implications for the form and geographic tendencies of urban development. Whether investment in real estate is autonomous from or dependent on investment in industrial activity is crucial in the theorizing of capitalist urbanization. For example, one would expect a much different timing and morphology of urbanization if investment in the built environment were dependent on conditions in industrial production than if it were not, or were only tenuously dependent.

My objective in this paper is to explore the temporal relationship between investment in the built environment and investment in industrial activity in the United States. The motivation is the theoretical argument developed mainly by Harvey that, under conditions of overaccumulation in the primary circuit (that is, the circuit of industrial production), capital switches to the secondary circuit (that is, the built environment) in search of higher profits. My analysis is confined to an investigation of the actual switching rather than a documentation of the existence of an overaccumulation crisis or the relative rates of return from various investments or an exploration of how that switching occurs institutionally.

The emphasis is on construction investment. Construction, of course, represents only one real-estate investment; capital also flows into the purchase and maintenance of existing buildings and structures, land sales, and legal, financial, architectural, engineering, and brokerage fees. In fact, although construction loans in 1986 greatly exceeded loans for land purchases, they were overwhelmed in scale by long-term mortgage loans. Nevertheless, it is construction investment that shapes the built environment, thereby forging a link between urbanization and capital accumulation, and that has attracted the attention of urban theorists interested in the capital-switching phenomenon. Last, to the extent that the theoretical argument has drawn on the real-estate and construction frenzy of the 1980s, the paper is focused on this period.

Despite the plausibility of the theoretical argument, however, the analysis yields little support for capital switching during this time period. In recent years, investments in the primary and secondary circuits have occurred in tandem. Further weakening the argument is evidence for a partial disengagement of capital investment in the secondary circuit from any correspondence to demand for new or renovated buildings and structures. The two circuits seem to have been delinked, thereby requiring a reconceptualization of the capital-switching argument.

2 The theoretical argument
What interests me is not public awareness of the construction boom of the 1980s and the subsequent backwash of speculative consequences, but the theoretical recognition of the built environment and the city-building process by urban political economists. That recognition has involved a host of issues, not least of which is a debate over the significance for capitalism of investment in the secondary circuit, the financial circuit that encompasses the built environment (Wilson, 1991). Absolutely essential to any understanding of this general issue is the theoretical argument made by Harvey, the roots of which lie in the work of Lefebvre

(2) The actual values in current (1986) dollars are $173 billion for construction loans, $40 billion for land loans, and $2160 billion for long-term mortgage loans from all institutional lenders (USBC, 1991, table 823).

(3) The built environment comprises all buildings, structures, and land forms that have been created for human use and appreciation. The city-building process is made up of the agents and actions that produce the built environment.
As early as 1975, Harvey had laid the groundwork for a major theoretical advance that would cast the built environment and city building as central elements in the overall dynamics of capitalism. He thus initiated a dramatic reconceptualization of urbanization. In a paper titled “The political economy of urbanization in advanced capitalist societies: the case of the United States” (1975), he pointed out how a portion of the surplus value of society had to be allocated to reproduce the built environment; that is, to add new buildings and structures and to maintain and renovate existing ones. Although such investments divert capital from accumulation, they are necessary for the accumulation to occur. Without a built environment “to meet new economic and technological contingencies and new social wants and needs”, the economy will likely stagnate (1975, page 120). Over the long run, Harvey noted, research had shown a decline in construction investment relative to investment in producer’s durable equipment (notably machinery) and an ability to produce a greater number of finished commodities with fewer additions to the built environment. He thus planted the seeds for the later development of the capital-switching argument.

Harvey also discussed the mediating influences of financial structures (both private and governmental) and the essential role they play in assuring that capital flows into city building and maintains its value. Significantly, Harvey used this understanding to suggest the autonomy of the urbanization process “within the broad constraints set by the functioning of the economic basis” (1975, page 127). Additionally, he pointed to the cyclical nature of this investment and noted that since the 1920s the rate of new capital formation in urban infrastructure has been remarkably low. From data on the dollar value of new construction put in place and the GNP, he concluded that “capital formation through the creation of urban infrastructure is of declining relative significance from the standpoint of the proportion of national product which it absorbs” (1975, page 123). The theoretical components of the circuits-of-capital argument, then, are all in place in his 1975 paper: the relation of the built environment to the sphere of production and capital accumulation in that sphere, the mediation of financial institutions and the relative autonomy of the urbanization process, and the cyclical nature of capitalist investments and thus the tendency towards crisis.

By 1978 Harvey had evolved an elaborate theoretical edifice in which to place the built environment, one which stemmed from a concern with how capital eluded inevitable crises of overaccumulation (1978, reprinted in Harvey, 1985a, pages 1–31). His ideas firmly implanted in a Marxian theoretical frame, he sketched a model of capitalism that was focused on the circulation of capital through three circuits: a primary circuit in which are produced the means of production and consumption, a secondary circuit of fixed-asset and consumption-fund formation but primarily centered on the built environment, and a tertiary circuit involving social investments (such as education and health) as well as investments in science and technology (1985a, pages 3–11). Focusing solely on the secondary circuit, Harvey argued that capital will flow into that circuit as a result either of the efficient management of mediating financial institutions or of crises in the sphere of production. The argument for capital switching deals mainly with the latter, though it does not exclude mediating influences.

Recognized by Harvey was that capital faced the potential for various kinds of crises, two of which are switching crises. Switching crises occur sectorally when capital fails to move from one type of needed investment to another; for example,
from military hardware into education. Geographical-switching crises occur when capitalists are unable to extract capital sunk into one region for use in another region where investment opportunities are more numerous and profits more robust.

Harvey proposed that a sectoral-switching crisis appears when overaccumulation exists in the sphere of production, or the primary circuit, idling the productive equipment, causing unemployment, driving down profits, and producing surplus capital. "As the pressure builds", he wrote, "either the accumulation process grinds to a halt or new investment opportunities are found as capital flows down various channels into the secondary and tertiary circuits". There, also, a "pervasive tendency" exists for overinvestment and a resultant "crisis of valuation of assets" (1985a, page 12).

Given his concern with urbanization, Harvey focuses solely on the switching of capital from the primary to the secondary circuit. The secondary circuit, with its privileging of private property, numerous submarkets, and opportunities for speculative profits, is very attractive. However, investments in the built environment are long-lived, spatially immobile, 'lumpy', and difficult to alter, thus requiring numerous financial mechanisms for assuring that capital once invested there can be returned to the primary circuit when the crisis of overaccumulation subsides. The switch to the secondary circuit is thus an outlet for idle capital and thereby deflects an impending capitalist crisis. Still, as investments in the secondary circuit become unproductive, a crisis of value emerges to encourage further switching.

Using historical data on construction activity, Harvey points out the cyclical nature of investment in the secondary circuit and its relation to overall crises of capitalism. He subsequently claims that "each of the global crises of capitalism was in fact preceded by the massive movement of capital into long-term investment in the built environment as kind of a last-ditch hope for finding productive uses for rapidly overaccumulating capital" (1985a, page 20).

However, he does not document overaccumulation, provide direct evidence attesting to the switch of capital from the primary to the secondary circuit, nor offer indirect evidence on the countercyclical relation of production activity and construction investment that would indicate, or at least be consistent with, switching. Admitting that the evidence is incomplete and his conclusion a 'first-shot generalization', he nonetheless claims a compatibility between his primarily theoretical argument and the historical data. Harvey, then, was explicit about the weak empirical substantiation for his position, but this critical caveat was forgotten as the logic of the theoretical explanation enticed urban theorists.

Harvey has elaborated on the capital-switching argument in his books The Limits to Capital (1982) and The Condition of Postmodernity (1989). In the first, he refines the basic argument, repeating his position that the option to switch capital into the secondary circuit "appears as a godsend for the absorption of surplus, overaccumulated capital" (1982, page 236). Reference again is made to the cyclical rhythms of this switching, though the book is a theoretical exigesis rather than an empirical substantiation, and also to the autonomy of the secondary circuit in the form of intricate arrangements that "establish independent means and independent forms of

4 The assumption here is that surplus value is only created in the primary circuit and thus it is in the long-run interests of capital to be there. In his later writings, though, Harvey notes how capital has become more interested in 'paper entrepreneurialism' than capital accumulation. Note that his argument is not fully compatible with the hypermobility-of-capital argument. Not only does he entertain the possibility of capital resting patiently in the primary circuit, but he asserts a switching phenomenon that is much less 'spontaneous' than hypermobility suggests.
circulation which can shape the spatial configurations of the built environment to
the variegated requirements of both capital and labor in general" (1982, page 194).
Overall, through the emphasis on cyclical behavior, Harvey implies that circuit (or
capital) switching is dependent upon conditions within the sphere of production.
However, by his recognition of financial intermediaries and derivative claims of an
autonomous secondary circuit, he establishes a case for the cyclical behavior of
construction investment to occur independently of conditions in the primary circuit.

This argumentative instability is highlighted in *The Condition of Postmodernity*
where Harvey takes another step in his theoretical journey. Rather than characteriz­
ing capital switching as a ‘safety valve’ functioning to avert capitalist crises, he
argues that the shift of capitalism to flexible accumulation and away from Fordist
forms of mass production is unique in its privileging of the financial circuit. “The
new financial systems put into place since 1972 have changed the balance of forces
at work in global capitalism, giving much more autonomy to the banking and
financial system relative to corporate, state, and personal financing” (1989,
page 164). The search for profitable investment opportunities outside the sphere of
production, then, is not a temporary response to overaccumulation but a new
strategy to combat tendencies to a falling rate of profit. In addition, financial
circuits have become less dependent on the production sphere: “the financial system
has achieved a degree of autonomy from real production unprecedented in capital­
isms’s history” (1989, page 194). This would also seem to increase the autonomy of
the secondary circuit.

To this extent, the surge of capital into the secondary circuit represents a
qualitative transformation of a central element of capitalism, and thus is a contribu­
tor to the continual evolution of capitalism. This is different from saying that the
switching of capital into the secondary circuit is a short-run strategy for coping,
often unsuccessfully, with crises in the sphere of production. Financial capital,
rather than industrial capital, dominates within late capitalism (see Sassen, 1991),
and under conditions of postmodernity, its circuit of choice seems to be that of the
built environment.

Few empirical studies have disentangled the complexities of Harvey’s theoretical
argument. Feagin (1987) attempted to confront the issue directly. Focusing specifi­
cally on office-building construction in Houston, TX, during the 1980s, Feagin
inquired as to the primary source of surplus capital flowing into the secondary
circuit. Motivating his search was the coincidence between 1979 and 1985 of rising
crude-oil prices (rises which spurred exploration and production in the Houston
region as well as oil company profits) and a massive expansion of office space.
Interviews with bankers and financiers led him to conclude that the source of
development capital was not the oil industry, but finance capital: large banks
outside of Houston, Houston-based banks that served as conduits for local and
external capital, real-estate syndicates, and foreign investors.

In response to the phenomenal growth of Houston, finance capital rode the wave
of expansion. Investors were so enamoured by the potential for large profits that
stringent financial feasibility criteria were relaxed, and financing was relatively
easy to obtain even for speculative buildings, eventually resulting in high rates of
vacancies, leasing concessions, and bankruptcies. Feagin ultimately could not say
whether switching from the primary circuit had occurred, but he did assert that the
surplus capital in oil industries of the Houston region was not moving directly
into office construction. The fixed-capital real-estate sector, he concluded, was “a
major outlet for surplus capital of all types” (1987, page 187, emphasis added). In
later work, though, he documented how certain oil firms diversified into property
development during the 1980s, thus providing evidence for switching, but not a switching that occurred necessarily at a time of overaccumulation (Feagin and Beauregard, 1989).

A second major empirical study of capital switching is King's three articles published in *Environment and Planning A* during 1989. The trilogy begins with an exploration of the role of ground rent in mediating investments in the built environment. King stresses the importance of class structure and cultural change in creating differentiated housing submarkets and the contribution of uneven development to building cycles. He additionally recognizes an alternative response to overaccumulation: the switching of economic crises to the political system, thereby leading to rationalization and legitimation crises.

In the second paper, King offers an empirical assessment of the cyclical relationships between primary-sector and secondary-sector investment in the Australian economy from the late 1920s to the mid-1980s. By using data on the ratio of fixed capital investment to GNP/GDP, King identifies eight switching crises. He finds them to be quite diverse in nature, some arising from the economy, some based in the political system, and one involving a war. King concludes that "in some periods investment in different sectors appears to have moved more or less in tandem (responding similarly to the availability of investment capital and to enabling demand), and at other times quite divergently suggesting different levels of incentive, and switching between sectors" (1989b, page 713).

By the third paper, King has traced these crises empirically to housing submarkets in Melbourne and has noted their sensitivity to household incomes and class-based behavior. In conclusion, he notes the tendency for economic crises to migrate into the political sphere and subsequently seep into the cultural system. King thereby greatly extends and deepens Harvey's argument.

If one sets aside the problematic empirical documentation of capital switching, the theoretical argument pivots crucially upon the degree to which one can conceptualize the built environment and the secondary circuit as autonomous from the sphere of production. Ball develops the notion of "structures of building provision" to rescue the built environment from being a "passive backdrop to other social processes" (1986, page 447). He points to the agents who create and profit from the built environment but who have no direct ties to the primary circuit and who thus carry their own agendas. Moreover, he takes note of the social struggles over building provision that make investment in the secondary circuit less likely to be determined by conditions in the sphere of production.

The perspectives provided by King and Ball are elaborated by Knox and Haila. Knox (1987; 1991) builds his argument on the distinct agencies that comprise the real-estate, design, and construction industries and on the cultural meanings embodied in the built environment that differentiate it from other commodities. Haila (1988; 1990; 1991) points not only to the emergence of agents concerned specifically with investing in property for speculative purposes but also to the function of rent in making investment opportunities in the built environment distinct from those in the primary circuit, thus generating a relative autonomy between the two circuits. Full autonomy is impossible, as each exists within the same capitalist structures, but investment in the built environment is driven both by demands emanating from the sphere of production and by demands generated within the highly differentiated real-estate industry.

The general purpose in this paper is to unravel one of the central motifs in the circuits-of-capital argument—capital switching. The investigation begins with an
assessment of the historical significance of the 1980s building boom in the United States. The temporal and compositional shifts within construction investment during the most recent expansion are explored by using data on the dollar value of new construction. Then, in order to determine the extent to which this surge in investment within (or into) the secondary circuit represents a shift away from other types of investment, various alternative investment opportunities are compared over time with investment in the secondary circuit. This analysis includes comparisons with GNP, business investment in new plant and equipment as well as in producer's durable equipment, and business incorporations and failures. Last, special attention is paid to the financial circuit, particularly the relation of mortgage and real-estate loans to construction cycles.

The main target is evidence of a countercyclical (or significantly lagged) relation between construction investment and alternative investments. Overaccumulation is not considered, and variations in profit rates across circuits are only briefly discussed. Although any definitive assessment of the circuits-of-capital argument is extremely difficult, a study of the internal dynamics of construction investment and a comparative analysis of investment options can establish a better sense of the recent relationship between the primary and secondary circuits under capitalism.

3 Construction boom: 1982–86

Providing an empirical focus for the capital-switching argument in the United States was what seemed to be a major movement of capital into construction investment and real-estate financing after the 1973–75 recession, particularly during the 1980s when the Reagan Administration worked diligently to facilitate capital investment through a reduction of the capital-gains tax, tax cuts for the affluent, favorable treatment of real-estate syndications, and the dismantling of regulations governing lending institutions (Feagin and Parker, 1990, pages 70–85; Gelbtuch, 1989; RRECG, 1989). Coupled with the emergence of a new round of conspicuous consumption, often attributed to young urban professionals (or yuppies), and an accelerated shift of industrial activity away from manufacturing and towards business services, the demand for and ability to speculate in office buildings, retail malls, and luxury housing increased (Ehrenreich, 1989, pages 196–243; Smith, 1987; Smith and Feagin, 1987, pages 3–34). Does the quantitative evidence support this widely accepted perception of a distinct 1980s building boom?

To answer this question, data on the value of new construction put in place in the United States were gathered for each year since 1915, the earliest date for which they are available. The data are collected on a monthly basis by the US Department of Commerce and represent the dollar amount of actually built buildings and structures (USDCa, various months).

In order to make the values comparable at different points in time, the yearly totals were adjusted by using the 1958 implicit price deflator derived from the GNP. Figure 1 displays these data as the value of new private-construction investment.

Focusing solely on private construction, since the building boom argument is directed mainly at nongovernmental investment, I indicate in figure 1 that the dollar value of private new construction increased steeply from 1944 to 1949 and then leveled off until 1970. In both these periods, the rate of growth in construction investment was approximately constant, with few of the cyclical perturbations that existed between 1920 and 1944 and after 1970. Since 1970, investment in private

(5) Hoyt (1960) argued that the government had created enough economic stabilizers such that building cycles would no longer appear. These stabilizers no longer seem to be working.
construction has exhibited cyclical behavior, and the overall secular or long-term trend has continued to be positive. Trough-to-trough cycles existed between 1970 and 1975 and between 1975 and 1982. From 1982 to 1986 another expansion appeared, followed by a downturn or contraction period that has yet to reach (at least given available data) another trough.

![Graph of New private-construction investment (billions of 1958 dollars) put in place, United States, 1915–89.](image)

Figure 1. New private-construction investment (billions of 1958 dollars) put in place, United States, 1915–89.

Did the trough-to-peak expansion of the 1980s cycle exceed previous postwar expansions and thus warrant identification as a significant surge in construction investment? Certainly, the 1986 peak is higher than any of the previous two peaks in 1973 and 1979 and higher than that of any other year in the postwar period. This could be because of the upward secular trend of construction investment. One way to 'control' for the trend is to measure expansion in terms of its trough-to-peak amplitude; that is, the difference between the largest value in the cycle and the previous smallest value. In constant dollars, the amplitude of the 1980s cycle was $27.58 billion. It was $24.14 billion for the late-1970s cycle and $17.02 billion for the early-1970s cycle. Measured in this way, the 1980s expansion was larger, but not by much.

Two additional measures of the magnitude of the cycle are its duration and the total amount invested during the cycle. The early-1970s and the late-1970s cycles lasted five and seven years, respectively, whereas the 1980s cycle has continued for eight years and is incomplete. Again, the 1980s cycle is 'greater' but not to any significant degree. Second, one could measure the cumulative investment during the cycle. Since the 1980s cycle is only a partial cycle when seen from trough-to-trough, we need to switch to a peak-to-peak point of reference to make this comparison. The 1979–86 full cycle generated $535.5 billion in construction investment whereas the 1973–79 cycle generated $376.2 billion. Compared with the two previous measures, this measure produces the largest gap between the 1980s building cycle and the preceding cycle.

In sum, although the construction expansion during the 1980s was clearly larger than previous ones, it was not unique. At least from 1970 onward, expansion was part of a cyclical and upward pattern of construction investment and, from 1944 onward, part of a long-term growth in the constant dollar value of private-construction expenditures. Between 1943 and 1989, for example, private-construction investment grew, on average, at a rate of $1.607 billion per year.
The perception of a 1980s building boom was fueled specifically by what seemed to be a drastic refashioning of the landscape with new office buildings, retail malls, and luxury housing, both in the central cities and in the peripheral suburbs (Knox, 1991; Relph, 1987). Was the 1980s expansion noteworthy for investment in these building types?

We can measure this in two ways: one, the percentage of each building type at the peak of the cycle when investment is most robust and, two, the percentage of capital going to different building types during the expansion phase. In table 1, I have displayed the values for these two measures for the three post-1970 expansions. Industrial construction has been included in order to reflect the concern with the relative decline of manufacturing in the United States.

In terms of peak and expansion percentages, office-construction investment was more dominant in the 1980s than in the two previous expansions. Although other commercial investment grew proportionately from the late 1970s expansion to the 1980s expansion, the increase was minor relative to office investment, and its peak-to-peak shares show no significant proportionate increase. Residential-construction shares also display mixed results. A peak-to-peak enlargement appears, but overall shares during expansions essentially remain constant. Clearly, though, industrial-construction investment declined relative to other types across this time period, though it had expanded from the early to the late 1970s at the peaks.

Overall, then, the 1980s expansion was 'fueled' more by investment in office and other commercial construction than was the case in the two prior expansions. Still, to the extent that luxury housing cannot be separated from all residential construction, and retail malls cannot be isolated from other commercial construction, the widely shared perception of the 1980s boom as mainly involving investment in office buildings, retail malls, and luxury housing cannot be unequivocally determined.

Thus, although the surge in construction investment in the 1980s exceeded previous expansions, that surge was part of a long-term secular increase in construction activity and an advance of only minimal proportions over the two previous expansions.

Table 1. Shares of construction investment during expansions: selected building types.

| Peak percentages | Office | Other commercial | Residential$^b$ | Industrial |
|------------------|-------|-----------------|----------------|------------|
| 1973             | 5.8   | 9.2             | 56.0           | 6.1        |
| 1979             | 5.3   | 8.6             | 55.0           | 8.3        |
| 1986             | 9.0   | 8.9             | 59.1           | 4.3        |

| Expansion percentages | Office | Other commercial | Residential$^b$ | Industrial |
|------------------------|-------|-----------------|----------------|------------|
| 1970–73$^c$           |       |                 | 54.5           | 6.8        |
| 1975–79                | 4.5   | 7.7             | 55.7           | 7.2        |
| 1982–86                | 10.0  | 8.3             | 54.4           | 5.7        |

$^a$ Shares do not add to 100% as the three types represent only a selected number of the building categories for which data are collected. The percentages were based on a 1970–89 data set that deflated investment values with the 1982-based fixed-investment GNP deflator.

$^b$ 'Residential' includes both new construction and renovation.

$^c$ 'Office' and 'other commercial' are not disaggregated prior to 1972. The aggregated percentage for 1970–73 is 14.7 versus 12.2 and 18.3 for the subsequent expansions.

$^6$ The time period for the analysis has been shortened here primarily so that temporally-linked building cycles can be studied independently of the noncyclical portion of the time series.
cyclical expansions. Nonetheless, though the 1982–86 building boom was not unique in this broad sense, compositionally it did exhibit a greater emphasis on office construction and a de-emphasis of industrial construction. Whether this is a long-term qualitative shift remains to be seen. Even if one concludes that the 1980s building boom was not unique in its scale or composition, the possibility still exists that capital did switch from the primary to the secondary circuit.

4 Assessing the movement of capital
To assess directly the switch of capital from one circuit to another, capital has to be tracked through the various changes of hands. A comprehensive study would include analyses of the financial packages of development projects, nonproject investment in the built environment (for example, small-scale housing renovations), government and public-authority construction activity, and the portfolios of selected financial institutions. This is a daunting task.

The research strategy opted for here is one of comparing the temporal patterns of private construction investment with various measures of nonconstruction investment activity that might suggest a de-emphasis of capital investment in the primary circuit and thus the possibility for switching to have taken place. This ‘weak’ analysis of the circuits-of-capital argument is useful as an initial step. The question is whether the 1980s expansion (or any previous expansion) in construction investment occurred as capital was being withdrawn from the primary circuit within the economy.(7) Two types of analysis are used: in one, I look at changing ratios of construction investment to nonconstruction investment and to economic activity, and, in the other, I look for countercyclical or lagged behavior on the part of the two sets of indicators.

I begin with different construction-investment ratios compared across the expansions. A trend of increasing values, with construction investment as the numerator and various general economic measures in the denominators, would suggest the switching of capital from outside to inside the built environment. For the three most recent periods of building-cycle expansion, construction activity during the 1980s boom did not represent a drastic shift in the allocation of the country’s GNP.(8) For the 1970–73 expansion, the dollar value of construction investment was 8.1% of GNP. It was 6.9% for the 1975–79 period, and 7.4% for the 1982–86 upturn.

A more relevant measure is the ratio of private construction investment to fixed private domestic investment. This ratio gives the relative proportion of capital flowing to the built environment as compared with all fixed capital investments: buildings, structures, machinery. Thus it provides a better estimate of any switching of money from one type of fixed capital investment to another, but it includes some double counting that might produce a distortion from a ‘pure’ nonconstruction-investment indicator. For the three expansion periods beginning in 1970, the respective percentages are 52.1, 47.3, and 45.7. Simply, and relative to all fixed-capital investment, less and less capital was being directed into the privately

(7) The ‘strong’ question would be whether capital flowed into construction activity because of a decline in its profitability in the primary circuit, which is essentially Harvey’s argument. This point is considered in the text, but only superficially.

(8) For the analysis in this section of the paper, a data set was created for the 1970–89 period, with the dollar value of all fixed investments deflated by using the fixed-investment GNP deflator (1982 = 100). GNP was deflated with the GNP implicit price deflator (1982 = 100). Note that this ratio was one of the indicators used by Harvey in his 1978 paper, “The urban process under capitalism”. Unless otherwise noted, all data used were collected from the US Department of Commerce’s (USDC) monthly Survey of Current Business (USDCb, various months).
constructed built environment over this twenty-year interval. In addition, the 1980s building boom had the lowest percentage of private capital in buildings and structures. These two ratios, then, do not suggest a sharp movement of capital from nonconstruction activities in general to construction or, specifically, from non-construction fixed-capital investments to construction of fixed-capital investments. In absolute values, as was shown above, the amount of capital directed to private construction did increase over these three expansions.

For an assessment of the switching of capital from the primary to the secondary circuit, one needs to be more precise about alternative investment possibilities. Thus, I now turn to a number of measures of nonconstruction investment activity, including investment in equipment and machinery, changes in industrial production, manufacturing capacity, and the number of business incorporations. Each permits one to look at the capital-switching phenomenon from a slightly different angle. If switching had occurred, one possible indication would be that investment in the primary circuit significantly lagged or acted countercyclically to investment in the secondary circuit; that is, investment in the primary circuit would peak at the trough of investment in the secondary circuit, and vice versa.

The temporal and scalar relationships between private-construction investment and various measures of industrial investment and output are shown in figure 2. A major target of capital investment within the primary circuit is expenditures on the buildings and structures that shelter production processes and expenditures on tools and machinery. This is represented here by business investment in new plant and equipment and by gross private nonresidential fixed investment in producer's durable equipment. The former investment includes industrial buildings and thus is not clearly distinct from private construction, but it was a key measure used by Harvey (1975) and thus deserves to be included.

![Figure 2. Construction, equipment, and industrial output (millions of 1982 dollars), 1970–89. Note: FRB, Federal Reserve Board index.](image)

It is obvious that capital expenditures on new plant and equipment since 1970 have exhibited cyclical behavior. Additionally, the peaks and troughs of capital flowing into new plant and equipment correspond, more or less, to the peaks and troughs of capital flowing into the built environment for new construction. The correspondence is approximate, however, because expenditures on new plant and equipment lagged behind construction investment in the two building cycles during the 1970s, but they led construction investment during the expansion of the 1980s.
One possible explanation for the lags is that construction expenditures had to be made before equipment could or would be purchased. This explanation fails for the 1980s expansion in which expenditures on new plant and equipment led construction investment. Thus, the evidence for countercyclical behavior is weak.

More pertinent to the switching argument is that expenditures on new plant and equipment fell below construction investment during the 1980s, and they were above it when peaking during the 1970s. Construction activities could have been drawing capital away from industrial activities, or capital could have been fleeing the primary circuit for the secondary circuit. The cases for both 'pull' and 'push' are possible with these findings. Overall, the case for capital switching is not supported by the temporal data. Nonetheless, the relative falloff of expenditures on new plant and equipment during the expansion in the 1980s points to a change in investment choices.

Expenditures on producer's durable equipment tell a similar story. Here, investment in industrial plant are excluded; the focus is solely on various types of machines ranging from trucks to rolling mills, including construction equipment. During the two full trough-to-trough cycles, expenditures on producer's durable equipment generally followed the temporal pattern of construction investment and ranged below it during the expansion phase of the construction cycle. As the economy turned upward, capital flowed into new construction and durable equipment, but less so into the latter. From 1979, investment in durable equipment mostly exceeded that in private construction and continued to expand even while construction investment began to contract in 1986. In the first two cycles, moreover, investment in producer's durable equipment peaked when private-construction investment peaked. (No peak is discernible during the most recent partial construction cycle.) As with expenditures on new plant and equipment, then, minimal support exists for an argument that capital switched from the primary to the secondary circuit.

If such a switching had occurred, one expectation might be that industrial production would fall, after a time, as a result of decreased reinvestment in industrial plant and equipment. Although it might be too soon after the 1980s building expansion to assess this definitively, the data neither indicate such a relation over the twenty-year period nor show a downturn in industrial production after the 1980s boom. The Federal Reserve Board index of quantity output, as shown in figure 2, continued to rise after construction investment had peaked in 1986. Prior to that, output rose as construction investment expanded, and without the lag that would indicate the earlier withdrawal of capital for use in the secondary circuit.

Other variables for industrial output reinforce the general impression that primary-circuit investment was operating in tandem with, rather than in opposition to, private-construction investment. The index of industrial production for equipment (not shown) shows little cyclical variation from 1970 to 1986; it steadily expanded. If one compares changes in this index across the three expansion periods, no trend appears. This is also true for the index of manufacturing capacity (also not shown).

Interestingly, the rise of industrial production during the 1980s was fueled partially by a corresponding growth in business start-ups. Although business incorporations generally behave cyclically, expanding as the economy expands, and thus along with private-construction investment, and contracting as the economy contracts, business incorporations also experienced a large secular increase, more than doubling between the 1973 peak of 329,546 and the 1986 peak of 702,700.
Entrepreneurs, it would seem, are not adversely influenced by construction-cycle expansions. Some of them, in fact, might well be participating as real-estate offices, architectural firms, construction companies, and lease-management companies. Nonetheless, when the number of business incorporations began to decline in 1986, industrial output continued to expand.

As a final probe into the relation between private-construction investment and industrial activity, we should consider briefly the profitability of investment in the built environment versus that in industrial production. First, the ratio of after-tax profits for manufacturing corporations to after-tax profits for all domestic corporations showed no downward trend through the 1980s. A downward trend would suggest a less attractive manufacturing sector. In fact, after-tax profits in finance, insurance, and real-estate (FIRE), where secondary-circuit profits might appear, were negative from 1985 to 1989. Using a ratio of pretax net (less loss) income for FIRE corporations to pretax net income for manufacturing corporations, one finds no consistent evidence that the ratio was higher in the 1980s expansion that in previous expansions, though the ratio was uncharacteristically high in 1985, 1986, and 1987 (peaking at 0.98 in 1986). Thus, these data do not point to a differential in profit rates consistent with the switching argument.

From measures of industrial investment, industrial output, business incorporations, and industry profits, then, one is hard-pressed to construct a credible argument for the switching of capital from the primary to the secondary circuit during the 1970s and 1980s. Nevertheless, further probing of the data reveals a uniqueness to the economic growth of the 1980s that attests to a qualitative distinction between the 1980s building boom and the two previous expansions.

5 Disengaging the circuits

The 1980s were characterized by speculative fever. Many investors were less concerned with enhancing the existing production facilities or with creating new businesses than they were in finding high-yield, short-term investments. This is one dimension of the hypermobility of capital. Business incorporations continued their steady, albeit cyclical, rise, but a virtual explosion in business failures occurred as ‘patient’ capital became scarce. Between 1970 and 1979, the number of business failures per year ranged from 11432 in 1975 to 6619 in 1978. During the next ten years, failures reached an all-time high of 61616 in 1986, and the low in 1980 (11742) exceeded the high of the previous decade. This was not creative destruction but an abandonment of businesses (disinvestment) in order to free up capital for more lucrative and shorter term investment opportunities. As we have seen, the preferred investments were not necessarily in private-construction activity.

The built-environment counterpart of this speculative behavior shows up in a comparison of mortgage and real-estate loans to private investment in construction activity (see figure 3). Loans by savings and loan associations for mostly residential mortgages (for purchasing either new or existing homes) generally led but paralleled the cyclical pattern of construction activity; that is, mortgages peaked before private-construction investment peaked. The exception was the 1980s expansion when both time series peaked in the same year. In addition, the expansion in mortgage loans was exceptional between 1982 and 1986, exceeding in amplitude that of the prior cycles. These were years of robust residential real-estate activity, but with residential mortgages closely following construction cycles.

(9) This analysis is based on data taken from the US Bureau of Economic Analysis and the US Internal Revenue Service that appeared in Statistical Abstract of the United States (USBC, various years).
Figure 3. Construction investment and real-estate and mortgage loans (all in millions of 1982 dollars), 1970–89.

More telling of the uniqueness of the 1980s building boom was the volume of loans made by large commercial banks for real-estate purposes; that is, loans for new construction or for buying existing properties. Since 1976, the constant dollar value of these loans rose steadily, with little cyclical variation after 1975, and, from 1982, accelerated rapidly, continuing to increase even as the amount of capital flowing into construction contracted. In effect, real-estate loans became disengaged from the rhythms of private-construction investment. Rather than lenders following the trends in actual additions to the built environment, suggesting a responsiveness to the demand for new space, loans were being given for other reasons.

One possible and highly plausible explanation for this discrepancy between real-estate loans and any resultant investment in new construction involves speculation. What became obvious in the 1980s as a result of tax-law changes and the escalation of property values in various parts of the country was that large profits could be made by the buying and selling of land and existing buildings. Buyers and lenders relied on appreciation, and not on the projected income flow of properties, to produce earnings. This meant that the financial feasibility of the property was less important than market-driven prices operating only tangentially to changes in income potential.\(^{(10)}\)

In essence, even though capital was flowing into construction activity, large commercial banks were also making many real-estate loans for the purchase rather than construction of buildings, and doing so with relaxed attention to traditional lending criteria. Investors were using the tax laws and ‘overheated’ property markets to speculate; that is, to invest not with the intention of producing a good or service but solely for purposes of turning a profit. Why else would real-estate loans continue to expand, and even exceed construction investment, in 1988 and 1989, after the construction cycle had turned downward? The result of this frenzied speculation has been high rates of vacancy in commercial properties in the late 1980s and early 1990s as well as falling rates of return on property investment (McCain, 1989; Warner, 1990).

A significant contribution to the disengagement of lending from construction activity was the surge of foreign investment during the 1980s, with many foreign investors less interested in present returns than in long-term appreciation. In 1973, investors

\(^{(10)}\) Of course, this type of behavior contributed to the savings-and-loan crisis in the late 1980s and early 1990s in the United States.
from outside the United States placed $0.6 billion in US real estate. By 1987, that had risen to $24.5 billion. Controlling for construction cycles, during the 1975–79 expansion, a yearly average of $1.082 billion came from foreign sources, but during the 1982–86 expansion the yearly average jumped to $8.383 billion in current dollars (NRC, 1989, table 6.5). This expanded the supply of available loan funds and spread the risk when US lending institutions joined with foreign investors on specific deals. The globalization of real estate introduced international considerations into the decision to lend (Feagin and Parker, 1990, pages 85–88; Goldberg, 1985; Logan, 1993; Sproul, 1992).

In sum, although capital was not flowing disproportionately into construction during the 1980s building boom, and investment in new plant and equipment and industrial production continued to be strong rather than being depleted by circuit switching, real-estate investors did heighten significantly the turnover in ownership of existing buildings relative to investment in new construction. Not capital switching but the disengagement of capital investment from materially based rhythms of construction activity appears to be a more apt description of the recent building boom.

6 Analysis and conclusions

To what extent do these findings require a reinterpretation of Harvey’s argument concerning the flow of capital into the secondary circuit during periods of over-accumulation in the primary circuit? Obviously, the analysis does not test directly his argument or assess it over a long enough time period. Neither overaccumulation nor comparable rates of return are documented. The focus was the building boom that occurred between 1982 and 1986, and only a portion (that is, construction investment) of all real-estate activity is considered, though attention is given to mortgages and real-estate loans. Nonetheless, the empirical relationships portrayed do provide an oblique view of the theorized phenomena and cannot be summarily dismissed.

Certainly, Harvey’s more recent arguments concerning the autonomy of finance capital are important; they are more compatible with the general findings here and the writings of Feagin, King, and Halla—the secondary circuit is not simply the ‘safety valve’ of the primary circuit. In addition, such findings suggest that primary-circuit capital might not switch to the secondary circuit but may seek other outlets: stock speculation, overseas markets, government bonds, or the tertiary sector. More needs to be known about financial intermediaries and about the political and social determinants of the demand for buildings, structures, and land forms. Implicit in my comments is that Harvey cannot be typecast as an economic determinist. Even in his earliest writings on capital switching he was aware of the role of financial intermediaries and, in later works, has also been sensitive to social, political, and cultural forces (Harvey, 1985b; Wilson, 1991). Nonetheless, with a few exceptions, the politics of capital switching is undertheorized and not yet the subject of extensive empirical scrutiny.

That said, these data indicate that during the years from 1970 to 1989 an expanding economy fed capital both into production and into construction on a cyclical rather than countercyclical basis, thus providing a weak foundation on which to build a bold claim for capital switching. On the other hand, it might well be possible that growth hid a shift of capital into the secondary circuit in the sense that the primary circuit grew less rapidly than would otherwise have been the case in a similar economic expansion. Such an analysis requires insights into an ‘idealized’ trend about which one can only speculate. The picture is further clouded by the infusion of foreign investment capital into the United States during the 1980s.
Moreover, how does one reconcile the continued investment in plant and equipment and the expansion of production output with other evidence that shows the acceleration of plant closures and the decline of certain basic industries? Thus, the findings presented here both fail to support the capital-switching argument and raise additional theoretical questions.

The most striking aspect of the above analysis is the disengagement of real-estate loan activity by large commercial banks from a demand-induced base, a base that would temper speculation and overbuilding. The buying and selling of properties in order to exploit favorable tax laws or rapidly escalating markets feed a rise in property values that encourages further speculative activity. To this extent, much of the exchange value of the built environment becomes increasingly fictitious and use values become increasingly peripheral. That governmental policy was behind this behavior speaks to a crisis in the secondary circuit independent of overaccumulation (see Badcock, 1992; Berry and Huxley, 1992), but a crisis likely to have reverberations in the primary circuit as industrial corporations are unable to attract investors because of greater rates of return in real estate.

All of this means that city building is less and less responsive to human need and more and more driven by entrepreneurial fervor. To the extent that such entrepreneurialism is based upon highly leveraged investments requiring little equity capital, and upon complex financing schemes that dissolve immediately after the 'deal' into a maze of international financial networks, then the potential for a deep crisis in financial circuits is exacerbated. It is not the switching of accumulated capital from the primary to the secondary circuit that is the issue, but the manipulation of capital to alter the value of the built environment without consideration of either the economic viability of investments or the contribution of such investments to the development of society.

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