Is Economic Planning Our Future?

Jacques Sapir*
Higher School of Social Sciences and Centre for Industrial Models, Paris, France
*e-mail: dk1403@rambler.ru

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Abstract—The article is devoted to the topic of economic planning at the state level. The historical excursus shows the origins of the planned economy elements on the example of three countries: Japan, India and France, as well as the evolution of its planned policy in the 20th century. The article provides a rationale for the relevance of planning, including as a tool to overcome market failures. The ESG agenda, in particular the issue of reducing the negative anthropological impact on the environment, is seen as one of the drivers for strengthening the role of planning.

Keywords: public policy, economic development, planned economy, market failures, energy transfer, decarbonization, economic planning, indicative planning

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Plan and planning are back in fashion. That may seem surprising more than thirty years after the dissolution of Gosplan USSR (1991) or the interruption of French plans (1992). Yet the Plan was far from having completely disappeared. China continues to have a Plan, even though it has long differed from the Soviet Plan. India, which formally dissolved the planning body, the Planning Commission, in 2014, has maintained a very similar body, the NITI Aayog, whose relationships are eerily similar to the body it replaces [1].

The return of the idea of planning is now an indisputable reality. We can see this in the economic debates on the energy transition and on the consequences of the COVID-19 pandemic [2] and particularly in France where President Emmanuel Macron recreated a “High Commission for Planning” in September 2020.1

The planning we are talking about is understood in the sense of so-called “indicative” or “decentralized” planning. This indicative planning has a history; the French contribution, if not the only one, was far from being negligible. It is therefore necessary to understand which were the situations, which imposed the planning. We therefore propose, in the following lines, to study three cases of indicative planning, India, Japan and France, by observing the origin of planning institutions and their results. This leads to a discussion of the relevance of planning procedures and the reasons for their apparent lack of support in these three countries. The conditions for the return to grace of the plan will finally be discussed based on the case of France.

Why planning? The so-called “indicative” or “decentralized” planning is a mechanism that allows existing resources to be concentrated on certain objectives and activities, which do not seem profitable enough in the short term to be of interest to the market. In these situations, state intervention helps to overcome market failures, and this intervention is all the more effective if it is part of general planning. Decentralized planning mobilized some of the greatest scientists of the twentieth century. It has attracted the greatest economists and statisticians, from Wassily Leontieff to Edmond Malinvaud [3] and François Perroux, from Roy Radner to Prasanta Chandra Mahalanobis [4]. The COVID-19 pandemic will also have been the occasion of an extraordinary strengthening of the role of the State, a strengthening which could refer to exceptional powers [5], and which raises the question of a coherent organization of this role.

Several arguments are added to justify the use of forms of planning in the economies for the years to come, whether it is to ensure a hypothetical pharmaceutical sovereignty, to reindustrialize the economy, to make it less dependent on chains production facilities that have been hit hard by the COVID-19 crisis, or to ensure the energy transition to a carbon-free economy.

Planning as a response to market failures. Planning is a process, which enables to concentrate the existing means towards certain objectives and activities when these do not seem profitable enough in the short term to interest the market, but are nevertheless socially necessary. This constitutes a first type of market failure [6]. This situation is fairly typical of developing

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1 https://www.gouvernement.fr/haut-commissariat-au-plan/presentation.
economies [7] but can be extended to developed economies in the case of a new technology presenting strong uncertainties in terms of the rate of profit, or of a strong specificity of the assets, or finally when the profit does not may be fully appropriated in one activity and diffuse widely to other activities. An interesting example is given in [8, 9].

Planning is a procedure for regulating competition in a situation of absolute scarcity of resources by allowing them to be allocated to priority users, which is a second type of market failure.

Planning is also a response to radical uncertainty, whether it is dominant only in certain activities or expressed in the entire economic context. Here we are facing a third type of market failure.

This radical uncertainty arises from surprise, in the sense defined by G.L.S. Shackle, which comes along with the perfectly unexpected event [10]. This surprise therefore invalidates economic calculation results and brings out the act of political decision as central in line with bounded rationality [11] while the markets are unable to manage this type of event. In this situation, discretionary political decision-making turns out to be more effective than economic calculation. This is also the case with heuristic decision-making [12], when it is opposed to restricted economic calculation, because it becomes impossible to calculate in advance the consequences of the unforeseeable event. In this situation, Otto Neurath had shown, as early as 1909, that it led to a return to the “war” economy, what he also called an “economy in kind” [13], and in 1919–1920 that planning could facing it prove to be superior to the market.

Planning as an instrument of the return to rationality. Beyond the question of market failures, the question of uncertainty raises the problem of the shift from substantial rationality, which can only work in a world governed entirely by probability, to procedural rationality [14]. Procedural rationality, which is the form of rationality that prevails when strong informational constraints dominate [15], plays a decisive role in strategic decision-making [16].

Planning therefore makes it possible to overcome uncertainty when it is likely to paralyze the market by reconstructing, through the publication of its objectives and the means implemented to achieve them, a predictable universe for decentralized agents as stated in Le Plan ou l’Anti-Hasard written by Pierre Massé [17]. For the latter, humanity is swept along in the game of what François Perroux calls “the overlapping waves of innovation” [18]. These induce a radical uncertainty that overturns the certainties of the present. The implementation of these waves of innovations actually supposes considerable and prolonged flows of resources. This the tensions between scarce goods persist in modern developed societies; they are even perhaps and paradoxically more alive than ever as we see today on the issue of rare earths. The role of the economist, of the planner is then to foresee and reduce the most notable tensions. As we can see, planning is everything except the mechanical pursuit of the past. It can be a place of debate and meeting par excellence of private and public decisions [19]; it is in itself a decision-making process that engages the future of the nation. Here we are: planning is linked with sovereignty. If this can be conceived without planning, at the risk of getting lost, planning cannot be conceived without sovereignty.

This view of the role of planning has attracted strong criticism. The key question was how the allocation choices should be made. For von Mises, apart from the calculation of costs there were no possibility of rational choice, a point hotly disputed by Neurath who considered that any economic choice in reality involves social, moral and ethical values [20]. This gave rise to one of the most important debates of the 1920s and 1930s about the possibility of the planned economy, a debate in which Ludwig von Mises [21], von Hayek [22] or Oskar Lange [23–26] made a name for themselves.

Neurath was undoubtedly right in the debate against von Mises [21], especially when he argued that the unpredictability of the future radically limits the cognitive role of price. So in the real world von Mises was referring to, the market price of primary goods could not match their relative degree of scarcity. Under these conditions, von Mises’s argument collapses, as O’Neill has shown [27].

More generally, the various procedures that tend to associate the actors are fundamental in the logic of planning through consultation, which was the French planning tradition and was implemented from the start by the French post-war General Planning Commission. They do not simply identify local priorities but help to form a consensus between the various actors concerned. They allow a harmonization of points of view and anticipations, whether this harmonization is conscious or unconscious. This harmonization or convergence is precisely the situation that the market must, in theory, create. This point is important because, in the 1930s, F.A. Hayek had quite rightly developed this argument of the convergence or harmonization of expectations as the intrinsic force of the market [28, 29].

The plan in capitalist economy: were origins stand? The idea of planning is largely linked to the two world wars of the 20th century. War economies have made economists, but also politicians and union leaders aware, that capitalism can be in a sense “organized” and served for ends that are not those dictated by mere profit. War economies made planning a reality [30]. This stopped to be vague speculations stemming from the writings of Marx and Engels, an ideal carried by the socialist militants of the time, or even an intellectual exercise—certainly stimulating—as in the work by

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Enrico Barone [31]. They exerted a profound influence in the decades that followed.

**War as origin of planning.** The 1914–1918 war imposed a brutal restructuring of economic activities on all the belligerents [32]. The phenomenon of the «war economy» can’t be reduced to the economy in wartime. It also covers the brutal restructuring of institutions and activities which, coupled with a single buyer, the state [33], tends to limit market mechanisms in favour of organized or even centralized allocation methods. Germany was the first of the belligerent countries to take measures to control the purchase and distribution of raw materials. The German war economy can be seen as the «prototype» of planning. The reason for this was the blockade put in place by the Franco-British [34–36], which no one could ignore would hit hard an economy highly dependent on the import of certain raw materials. The reorganization of the German economy thus began practically in the early days of the conflict [37].

France was confronted too with a strong increase in industrial demands but one that was combined to an equally strong reduction in production capacities. The German Army occupied 3.7% of the national territory with 8.2% of the population [38]. This amounted to 14% of the labour force, representing 58% of steel production and 40% of coal [33]. Men like Albert Thomas [39], Victor Dalbiez, Louis Loucheur [40] or Étienne Clémentel [41] organized, thanks to new laws (Dalbiez law of June 4, 19152) or decrees, a real mobilization of the war economy, with requisition of companies and workforce. This policy, slowly implemented in 1915, developed in 1916–1917 to lead to an original model of planning through consultation.

The question of economic mobilization was raised in 1917 in the United States. The late entry into the war, however, largely limited the scope of measures taken despite initial ambitions [42, 43]. These measures consisted mainly in attempts to control the economy through centralized control of prices [44, 45] and production [46]. Existed then during World War I a wide range of government agencies charged with influencing or controlling economic activities, which operated under the authority of the Council on National Defence established by President Wilson in 1916 to prepare for entry into war of the United States [47]. However, the impact of World War I was relatively limited.

This nevertheless ignored the creation in 1924 of the Army Industrial College, which would play a decisive role in preparing men for the mobilization of World War II [48]. From the mid-1920s to the 1940s, the Army Industrial College developed a series of “plans” and concepts for the mobilization of the American economy in the event of major conflict; these plans were largely inspired by the French experience of planning through consultation [49]. This impact of the French experience, concentrated in the 1920s, is not surprising given the prestige then acquired by the French Army in 1918, but also the experience of many American officers who had seen how the military-industrial—with which some had been associated—system worked.

In all countries, states have to varying degrees governed the economy. They did this first by securing vital supplies, but also by seeking to avoid waste and finally by organizing trade and commerce. The rationalization of production was largely implemented. States did not hesitate to constitute themselves as producers. But, the logic of the industrial division of labor imposed to extend this system to many basic industries creating, at the end of the process, a sector hegemonized by the State on which it depended, if not for property, for financial reasons and priorities in the allocation of raw materials. This extension of state control sometimes extended even to agriculture, especially in Germany.

There was therefore a whole planning experiment in “capitalist” economies that arises out of the First World War. This experience was reinforced and consolidated by the Second World War. It profoundly affected decision-makers and post-war economic policy, as historian Alan S. Milward notes: “The successes achieved left those concerned with the management of Western economies with profoundly different attitudes towards economy (...). Henceforth, they would no longer feel helpless victims of economic forces beyond their control. The economies were directed, positively and successfully, on different trajectories during the war period” [50].

**The origins of post-war planning in India, Japan and France.** The origins of the planning process in the post-WWII era are manifold. The comparison between India, Japan and France allows us to better appreciate this, but also to discern points of convergence.

**India.** The case of India is typical of a country gaining independence [51]. Planning appears as a means of rapidly obtaining strong economic development [52, 53], a guarantee of economic and political sovereignty [54].

But the debate actually took shape there in the early 1930s. If great intellectuals influenced by communist ideas intervened in this debate, their weight was less important than that of intellectuals from the nationalist movement [55]. We can note Meghnad Saha [56], an astrophysicist well known in his discipline and especially Mokshagundam Visvesvaraya. Born in 1860, he is considered the pioneer of planning in India. His book “Planned Economy for India” published in 1934 and again in 1936 [57] proposed a ten-year plan and his ideas were firmly anchored in the concept of “democratic capitalism”.

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2 http://genealogie.dalbiez.eu/Loi%20Dalbiez.htm.
At the same time, the idea of planning was emerging within the main party demanding independence, the Congress Party. In 1938, the Indian National Congress appointed a National Planning Committee (NPC) to prepare an economic development plan. In October 1938, the National Planning Committee (NPC) was therefore created under the leadership of Nehru and its members included a mix of scientists and top businessmen of the time including Meghnad Saha and M. Visvavarya (with the double cap of promoter of the first plan project in India and representative of Tata Steel). However, with the outbreak of World War II in September 1939 and the imprisonment of the leaders of the Congress Party, all this was called into question. The NPC was suspended in 1940.

Indian industrialists then took up the planning torch. They were working as part of the British war effort. From the end of 1943, some of these industrialists came together to discuss the development of the Indian economy after the war. This gave birth to one of the most discussed plans in India during the 1940s: the “Bombay Plan” [58]. In this plan, planning and industrialization were largely synonymous. A key tenet of the Bombay plan was that the economy could not grow without government intervention and regulation, a point on which Indian industrialists in fact joined the left of the Congress Party.

Jawaharlal Nehru, the first Prime Minister of India from 1948, adopted some of the ideas of the Bombay plan, in particular those of a substantially interventionist state and an economy with a large public sector [59]. The Bombay plan has then become a witness to the developmental and nationalist aspiration of the national capitalist class [60]. Planning then emerges as one of the indispensable instruments for Indian sovereignty.

Japan. The adoption of planning in the immediate postwar Japan provides a second example. The expansion of the Japanese economy after 1945 was carried out within the framework of a planning [61], admittedly qualified as «indicative», but in which the means of controls by the state were far from being negligible. Like many Japanese economic institutions of the 1950s and 1960s, the plan has its origins in the period of the war economy [62] and economic thinking of the late 1930’s.

Among thinkers and intellectuals, Narumi Hijikata defended the idea that Japan should have an “Economic Headquarters” in order to organize the interests of the Keiretsu and large Japanese companies in a convergent manner with those of the state [63]. Another important intellectual influence was the Showa Research Association (Shōwa Kenyukai), formed under the inspiration of Prince Konoye. It set itself the goal of developing exchanges between university economists, entrepreneurs, military journalists and senior officials [63]. This association brought together academics from the left, even from the far left, but also ultra-nationalists and was one of the centers of the so-called “reformist” movement which coincided with Konoye’s rise to power. As early as the 1930s, technocrats had sought to combine state planning and private initiative. Learning from the lessons of industrialization in Manchuria and Manchoukuo since the early 1930s [64], these technocrats—under the leadership of Nobusuke Kishi3 who had played an important role in the administration of Manchoukuo [65]—they had recast their policies in more business friendly terms.

With the outbreak of conflict with China in 1937, the economy shifted completely to a war economy [66]. Most Japanese companies remained private, but they were heavily regulated to help with the war effort [67]. The key steps to establishing the war economy converged in the constitution of the Cabinet Planning Board (CPB) [68]. The most brilliant bureaucrats from various ministries were assembled for this purpose. A one-party system was advocated and adopted in 1940. However, we cannot speak of “Japanese fascism” as shown by Peter Duus and Daniel Okimoto [69]. The CPB planned the National General Mobilization Plans (Kokkasodoin-keikaku), which were at the heart of the Material Mobilization Plans (Butsudo-keikaku), and it spearheaded the application of the National General Mobilization Law [70, 71].

The planning dreams of Japanese technocrats were quickly dashed when the tide of the war turned against Japan. But their project survived the defeat. From the late 1940s, banking on the reversal of the occupation policy by the United States following the start of the Korean War in order to make Japan the bulwark against communism in Asia, the technocrats have emerged as the main architects of the fast-growing Japanese system [72]. The policies of the late 1930s to early 1940s [73] were largely retained after World War II and worked into the 1950s and 1960s as Japan developed rapidly.

France. In January 1946, France created the Commissariat Général au Plan, which proved to be extremely effective for many years. The context seemed to dictate this planning. The country was emerging from World War II ravaged both by war and by the multiple looting of the German occupation. However, the origins of planning thought are multiple and complex.

The Vichy regime was to put in place the first planning instruments [74], taking up the ideas of the group called X-Crise [75, 76]. The Delegation Generale à l’Equipement National (General Delegation for National Equipment or DGEN) presented by May 1942, a document which described a plan of 10 years aimed at the reconstruction of the country with a strong industrial and technological catch-up and con-

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3 Nobusuke Kishi, 1896–1987, was Shinzo Abe, the Japanese Prime-minister from 2012 to 2020, great-father.
trolled urbanization [77]. This plan was implemented at the beginning of 1944, in the context one can guess. In total, only the two-year “start-up phase” of the plan was actually launched. It will be taken over by the de Gaulle government in the fall of 1944 [77]. For its part, the DGEN will serve as the basis for the future Commissariat General au Plan (CGP) [77].

Planning naturally occupied a significant place in the economic projects of Free France too. Two names here emerge, that of Mendes France and Georges Boris, co-authors of a planning project dating from 1938. Boris arrived in London on June 19, 1940. He was to participate in the work of the Economic, Financial and Social Commission created by General de Gaulle in December 1941, well before the Conseil National de la Résistance (CNR). It was in this commission that post-war reform plans began to be discussed. The CNR program was published at the beginning of 1944. It allusively evoked the prospect of planning [78]. With the gradual liberation of the territory, these ideas turned into economic decisions. The action of Mendes France was notable here [79]. When he returned to the Commissariat aux Finances in November 1943, it was by defending an economic policy that included planning [79]. As soon as Mendes-France took office as Minister of the Economy in the Provisional Government (June 1944), Georges Boris was appointed to deal with the Plan. But the implementation of a Plan came up against the conflicts aroused by Mendes-France monetary reform project, which ultimately was rejected by General de Gaulle. Mendes-France resigned and this opened the door to the third source of influence, American influence.

On December 13, 1945, in a memorandum addressed to General de Gaulle, Jean Monnet therefore in turn proposed the development of a national plan. Jean Monnet was linked in London with a former deputy of the Socialist (SFIO) party, André Philip [80], who had voted against full powers in Pétain in 1940. The two men found themselves in a common opposition to de Gaulle, which they nevertheless served during and after the war, and by their proximity to American positions [81]. They were the main channel of American influence with Free France, in London as well as in Algiers [82]. In 1944 and 1945, while he was still in Washington, Monnet undertook to define, with the help of his American friends, the main lines of a French plan. Robert Nathan in particular, who had headed the Plan Committee of the War Production Board, was very directly involved [83].

Monnet and his American collaborators were trying to apply the American experience of wartime planning for postwar France [83]. Monnet then described the Plan in these terms, in a note that probably dates from the end of spring or summer 1946: “Nostalgic people, with their eyes turned to the past, deplore the intrusion of the State into economic life. (...) The ambitious, considering certain foreign achievements or the city of their dreams, underline, on the contrary, the insufficiency of the ends that the State proposes to itself and of the means which it gives itself. The Monnet Plan will disappoint everyone.

It must, on the contrary, seduce the Frenchmen of good sense for whom freedom is not anarchy, nor order, the advent of bureaucracy. (...) From liberalism, the 1st Plan rejects profit as the only guide to the economy, but resorts to it as a stimulus. From bureaucracy, the Plan rejects intrusive and finicky interventions. But, from interventionism he retains the need to discipline reconstruction in the name of the sole criterion of the general interest”. [83] These words aptly sum up the balanced position he intended to maintain.

Planning results. The results of these planning experiments were mixed. They were very positive in India until 1962, in France and Japan until the early 1970s.

India, half a failure, half a success? Indian planning spanned a long period, from 1950 to 2017, and continues currently, in a very residual form, to this day. This makes it the longest planning experience, longer than that of the USSR and Eastern European countries actually, on par with China. The crucial point here is that this planning never used all the instruments of “centralized planning” of the Soviet model [84, 85]. The differences with the Soviet “model” have always been substantial [86], and India retained its mixed-economy nature as defined by Nehru. The place of the State in the economy was certainly important, especially from 1965 to 1990. But, was it not in the logic of an economy starting with a strong problem of under-development and seeking to catch up [87]? Has planning helped India emerge from underdevelopment faster than if India had not had planning? The question is delicate, because there is no “control group” in Asia, other countries (Japan, South Korea, Taiwan) having also adopted forms of planning. Compared with the developed countries of the OECD, India’s growth was initially slower (Table 1).

But the weight of the military conflicts India faced from 1962 to 1972 arguably explains this. Globally, India was experiencing several problems: insufficient savings, backwardness in agrarian structures and equipment in rural areas, dependence on Great Britain and significant technical backwardness.

The first problem involves an inflation rate (Table 2) that corresponds to the “inflationary gap” described by Keynes [88]. It can also be argued that with planning India set a target for aggregate demand, which also had inflationary implications [89, 90].

In Table 2, we can see that the standard deviation and the mean deviation increase considerably over the decade 1968—1977. This is, quite logically, the effect of the military conflicts of the period, but also of the...
food crises. The reforms of 1985—1991 also resulted in significant inflationary pressures.

India has gradually broken with the situation of dependence vis-à-vis Great Britain and it has caught up with its technical backwardness in many sectors ranging from the nuclear industry [91] to the pharmaceutical industry to electronics. The role of the state planning has been decisive here. The same could be said for infrastructures development. There remains the question of agriculture. Despite the various priorities of the plans, it has only developed slowly. The impact of planning was therefore small on this sector, as it was on reducing income inequalities, although the latter narrowed from 1950 to 1985.

In fact, like many other countries around the world, India has been hit by the wave of neoliberalism. The 1991 external debt crisis brought India closer to default. This was the reason explicitly cited for the implementation of the reforms. This new policy adopted by India was a break with the previous policy and involved increased reliance on market forces. In addition, the role of the state in the sphere of economic development has been considerably reduced. Finally, the degree of openness of the economy has been significantly increased [92].

Inequalities exploded in India then (Fig. 1), and in particular between cities and the countryside [93]. The harmful effects of these neoliberal policies have paradoxically led to a worsening of the debt crisis, but also to the degradation of the environment and the rise in unemployment, accompanied by the rise in food and fuel prices and the fall of salaries.

Social harms have been exacerbated by the imposition of «austerity measures» of cutting subsidies to the poor and cutting public spending on health, social protection and education. The period of planning decomposition, which begins with Rajiv Gandhi’s reforms, while accompanied by strong growth, has also been accompanied by a dramatic increase in inequality.

Japan: A spectacular success? Two periods here are important. The Plans which drawn up from the 1950s to the late 1970s were tremendous successes, marked by very high growth rates (Table 3). On the other hand, the Tanaka plan of 1975 was a failure. Designed in reaction to the oil crisis of 1973, it proved unable to...
provide growth of more than 3.1% when a rate of 9.4% was expected.

The Maki plan targeted growth of 6% per year. The latter did not exceed 4.5%. From the 1980s, the planning process lost its reality and importance, and average annual growth did not exceed 2.7% over the period 1980–1999. With the impact of the “lost decade”, there is a tendency to view the Japanese economy as stuck in weak growth. This led some observers to speak of the end of the Japanese “miracle” [95].

But, weren’t there more of the building and then the destruction of the institutions that allowed this country to experience very strong growth? Moreover, are the difficulties encountered by the Japanese economy due to planning institutions or, on the contrary, to their gradual dismantling from the early 1970s to the 1980s?

An objective assessment of planning in Japan must therefore be based on several criteria. The first is, of course, that of growth. For this, it is necessary to look precisely at the characteristics of this growth.

Whether for the level of average growth or for that of the reduction in the magnitude of fluctuations, the so-called “high planning” period (1956–1971) comes out on top (Table 4).

If we now observe more qualitative criteria, the period of “high planning” is also characterized by a much stronger investment, but also much more balanced, than the previous periods [96, 97]. If the investment was particularly important in the following period, which can be described as “planning decadence”, this was the product of unregulated competition between large companies and resulted in a financial crisis which reflected the significant accumulated

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**Table 3.** List of the 6 first Japanese plans, %

| Plan’s name                      | Five years plan for economic autonomy | New economic plan | Doubling national income plan | Middle-term economic plan | Economic and social development plan | New plan for economic and social development |
|----------------------------------|--------------------------------------|-------------------|-------------------------------|----------------------------|--------------------------------------|---------------------------------------------|
| Date of publishing              | Dec.-55                              | Dec.-57           | Dec.-60                       | Jan.-65                    | March-67                             | Apr.-70                                     |
| Prime-minister in charge when the plan was adopted | Hatoyama                            | Kishi             | Ikeda                         | Sato                       | Sato                                 | Sato                                        |
| Theoretical plan span           | 1956–1960                            | 1958–1962         | 1961–1970                     | 1964–1968                  | 1967–1971                            | 1970–1975                                   |
| Average growth before the plan  | 8.6                                  | 7.3               | 9.1                           | 11.3                       | 10.0                                 | 12.7                                        |
| Growth target                   | 5.0                                  | 6.5               | 7.2                           | 8.1                        | 8.2                                  | 10.6                                        |
| Forecasted growth spread        | –3.6                                 | –0.8              | –1.9                          | –3.2                       | –1.8                                 | –2.1                                        |
| Plan actual growth              | 9.1                                  | 10.1              | 10.9                          | 10.8                       | 10.9                                 | 6.1                                         |
| Gap between forecasted and actual growth | 4.1                                  | 3.6               | 3.7                           | 2.7                        | 2.7                                  | –4.5                                        |

Source: [94].
imbalances [98]. Likewise, the so-called “high planning” period enabled Japan to manage its dilemma between investment, domestic consumption and the balance of payments in a way that was far less unbalancing for the world economy than in later years.

This planning also had an obvious and significant impact on other Asian countries, such as South Korea (which adopted a five-year plan regime) [99–101], Taiwan [102], Malaysia [103] (from 1966) and Singapore [104]. It was an element of Japanese “soft power” in the Far East. From this point of view, too, it has undoubtedly proved to be one of the most successful models of planning in a “capitalist” country.

**Success and decay of planning in France.** France’s economic trajectory in the post-war years was spectacular, leading to the years 1945–1975 being called the “Trente Glorieuses”. How much of this is due to planning [105]? The latter, far from having been the sole prerogative of France, has been imitated in several countries [106]. Charles Kindleberger drew a glowing review in 1962 [107]. Indeed, assessment that can be drawn from the planning in the 1950s and up to the 1970s [108, 109], can be regarded as positive.

The object of an assessment is not, however, to know if France has rebuilt and developed itself in the twenty-five years which followed the war [110] but, rather, to know if the French model of planning conferred a comparative advantage. The next question is how to measure this advantage and what were the constraints that faced, as well as the advantages enjoyed by different countries. We will therefore take 5 countries, France and Italy (which have had forms of planning), Germany in the FRG sense (country which has not seen fit to adopt a form of planning) and the United States and the United Kingdom, countries that were then considered as targets for countries under reconstruction (Table 5). France was constrained by colonial wars but was able to benefit from the Marshall Plan (or ERP) ERP, like Italy, the FRG and the United Kingdom. The latter was constrained by its international role, where it wanted to maintain a posture equal to the United States. The FRG, for its part, benefited from the spending of the US military on its territory (like Japan) and the flow of skilled labor fleeing the GDR until the late 1950s.

One can see that France and Italy have done better than the United Kingdom and the United States and even Germany from 1960 onwards. We also observe that French growth, if it lags a little behind in the 1950s, no doubt due to the overvaluation of the exchange rate mentioned by Kindleberger, accelerated in the 1960s (once the Franc depreciated and the colonial question) and is more stable than in the other four countries. Qualitatively, the productivity gains were spectacular (Table 6).

We can also see that the efforts to modernize the various French plans have borne fruit if we look at the productivity gains. The gains were significant in agricultural activities at large and in industry where they are even tending to accelerate. This is the result of the various modernization actions undertaken from the 2nd to the 5th Plan. As for investments, the results of France appear very good. They should be compared with the eight percentage point increase in investment GDP recorded in France (Fig. 2). Moreover, from 1952 to 1967, this increase is almost linear. This reflects the effectiveness of investment support policies under the conditions of the time.

**Planning: from decline to resurrection?** However, French planning will be weakened and then deconstructed by a series of factors, both internal and external.

The latter are generally well known: major rise in the price of oil from the end of 1973 to the beginning of the 1980s, pressure from increasing international competition, increasingly heavy impact of the European framework, in particular with the signature of the
But, these external factors, except in the case of the oil crisis, could only have had these destructive effects because of internal decisions that gave them decisive weight, even anticipated and aggravated them. The impact of international competition can only be explained by successive free trade factor decisions and the decision to maintain an overvalued exchange rate. The significance of the European Single Act was made much important in France, due to the pro-European turn taken in 1983 by François Mitterrand. This ushered in an era of financial rigor. Finally, financialization was a deliberate choice of the French administrative elites [111]. The three successive plans after 1980 will each represent an additional stage in the planning breakdown process.

The causes of the turnaround that took place in the 1970s are, it has been said, multiple. Some are linked

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**Table 5.** Rate of growth, comparison, %

| Plan             | Years       | France | Italy | Germany (FRG) | United Kingdom | United States |
|------------------|-------------|--------|-------|---------------|----------------|--------------|
| 1st Plan (partial) | 1949–1953   | 4.91   |       |               | 2.21           | 2.59          |
| 2nd Plan         | 1954–1957   | 5.22   | 5.27  | 8.39          | 3.02           | 5.16          |
| 3rd Plan         | 1958–1961   | 4.21   | 6.49  | 6.40          | 2.54           | 2.34          |
| 4th Plan         | 1962–1965   | 5.40   | 4.30  | 4.81          | 4.07           | 3.80          |
| 5th Plan         | 1966–1970   | 5.22   | 6.13  | 4.26          | 2.77           | 2.92          |
| 1952–1961        | Average     | 4.12   | 5.85  | 7.78          | 2.24           | 2.75          |
| 1962–1970        | Average     | 5.30   | 3.32  | 4.50          | 2.88           | 3.92          |
| 1954–1970        | Mean deviation 1952–1970 | 0.81 | 1.02 | 2.05 | 1.18 | 2.01 |
| 1954–1970        | Variance × 100 | 0.99 | 1.76 | 7.15 | 2.07 | 5.83 |

Source: INSEE and different countries statistical offices.

**Table 6.** Average annual productivity gains by sector (1st to 5th Plan), %

| Plan             | Years       | Global productivity | Agricultural productivity | Industrial productivity | Construction productivity |
|------------------|-------------|---------------------|---------------------------|-------------------------|--------------------------|
| 1st Plan (partial) | 1949–1953   | 3.0                 | 6.3                       | 3.4                     | 0.6                      |
| 2nd Plan         | 1954–1957   | 6.0                 | 5.0                       | 5.0                     | 3.8                      |
| 3rd Plan         | 1958–1961   | 5.7                 | 10.9                      | 6.6                     | 5.0                      |
| 4th Plan         | 1962–1965   | 5.9                 | 3.4                       | 7.5                     | 3.0                      |
| 5th Plan         | 1966–1970   | 7.8                 | 9.3                       | 9.3                     | 3.7                      |

Source: INSEE.

Single European Act which entered into force in 1987 and the progressive financialization of the economy which took place from 1984–1986.

**Fig. 2.** Investment in GDP percent.
Source: INSEE.
to the collapse of the alliances and political blocs that
carried the idea of planning in the early 1940s. This is
evidently the case in India. Others are linked to strug-
gles within the administrations from which the various
planning bodies originated. This was the case in
France and Japan. In these struggles for administra-
tive preeminence and power enter deeply ideological
elements, but also the personal interests of the actors.
Finally, the key elements of the international context
have changed. But, is this change purely exogenous or
was it not prepared from within certain countries? The
border between exogenous change and endogenous
change appears here to fluctuate widely.

Economic or political crisis? For Japan as for
France, the immediately visible break was the oil cri-
sis. It is probable, and even certain in the French case,
that it was accompanied by other ruptures. A lot of
economics book have been published on this matter,
along them [112–116]. Planning will not recover from
the shock, less because of its inability to adapt to the
new situation and more because of a breakdown in the
consensus surrounding the broad directions of the
economy that this shock exacerbated.

This rupture led to the gradual dismantling of the
instruments and institutions on which planning was
based. To what extent did the administrative elites in
France but also in Japan rely on the new context to jus-
tify this dismantling and to what extent they created
the new context, or at least an institutional framework,
making planning less and less practicable in its classic
form, remains to be studied in more detail. The case of
trade liberalization and financialization practices is a
good example.

However, the main measures were national, and
they made planning less and less practicable. We see
this for France in the case of financial liberalization,
which was largely the work of senior officials from the
Finance Inspectorate [117–119]. For France in partic-
ular, it is clear that there was a will on the part of the
administration to put an end to planning from the
beginning of the 1970s and even before.

This section of the administration will use the con-
sequences of the oil crisis and then the dynamic of
opening up the economy (and the growing power of
the European framework) to dismantle the instru-
ments of planning and reduce it to impotence. It found
its advantages when the most eminent members were
appointed to head public enterprises in the process of
privatization. This explains why the arrival in 1981 of a
Left Union government will bring no change. The
Ministry of Planning, which was given to Michel
Rocard, was indeed a sinecure without means.

The context of a resurrection. Yet this planning,
which one might have thought buried, relegated to
limbo, is now making a dramatic comeback. This is
done in a context marked by the significance of the
concept of sovereignty. In his speech of July 12, 2021,
Emmanuel Macron repeatedly referred to the inde-
pendence of France. When he talks about the deci-
sions to be taken, it is to put this in mind: “The will
that France must carry is indeed this: regain control of
our destiny...”. When he concludes, it is with these
words: “So, at the start of the school year, we will have
an appointment with our future. To build an indepen-
dent France (...).” It will take up again this theme
during the presentation of the “France-2030 Plan” on
October 12, 2021.

If we go back a little, we find this declaration of
the President, when he inaugurated on July 2, 2021 the
exhibition “Made in France”: “The made in France,
is sovereignty, independence, that is to say the ability
also, as several of you have done, to relocate know-
how or production shares on French soil”. Or again,
in the speech delivered on June 29, on the occasion of
the presentation of the health innovation strategy
2030, where he used the word “sovereignty” four
times, a word that was also spoken in the address to
the French of November 24, 2020.

There is therefore no doubt that the notions of sov-
erness, of national independence, are regularly men-
tioned in the vocabulary of the Head of State, even if
one can wonder about the real meaning he gives them.
Let us add to this a questioning of the omnipotence of
the market, in his speech of November 9, 2021: “To
meet all these challenges, to control our destiny, the
market alone is not enough. We must assume a strong
public intervention with, in a few key areas, significant
investments”.

And, Emmanuel Macron is far to be alone to regu-
larly invoke these notions in his statements. Arnaud
Montebourg, former Minister of the Industry and
putative father of the “made in France” movement,
did the same. We are therefore not out of the “sover-
eignist moment” that could be diagnosed as early as
2016 [120] and which continues to permeate French
politics. However, we have seen, whether with regard
to India, Japan and of course France in 1945, that
planning was central in the struggle to regain or assert
sovereignty. It is then understandable, that the ques-
tion of planning is again approached.

5 https://www.elysee.fr/emmanuel-macron/2021/07/12/adresse-aux-
francais-12-juillet-2021.
6 See note 5.
7 See note 5.
8 https://www.elysee.fr/emmanuel-macron/2021/10/12/-presen-
tation-du-plan-france-2030.
9 https://www.elysee.fr/emmanuel-macron/2021/07/02/-inau-
guration-de-la-grande-exposition-du-fabrique-en-france.
10 https://www.elysee.fr/emmanuel-macron/2021/06/29/-faire-
de-la-france-la-1ere-nation-europeenne-innovante-et-souver-
aire-en-sante.
11 https://www.elysee.fr/emmanuel-macron/2021/11/09/-adresse-
aux-francais-9-novembre-2021.
12 https://www.lepoint.fr/politique/montebourg-appelle-a-une-
reconquete-de-notre-souverainete-et-une-reconstruction-
ecologique-08-04-2020-2370666_20.php.
The current need for a return to planning: the case of France. We must therefore try to understand the underlying reasons, and the arguments used for this purpose, for the return to favor of the idea of planning. We must also ask ourselves whether the instruments of planning can again be mobilized.

Is there an actual “downgrading” of France? In the case of France, it is clear that the shock induced by the health crisis played a big role. This shock revealed a pre-existing situation of deindustrialization of the country, everything did not date from the COVID-19 far from it, but it revealed it with a force and a cruelty that marked the spirits deeply. From this episode ensued a return of the idea of Plan to the public debate.

The image that the French will retain of this epidemic is that of the great downgrading of France, reduced in many ways to the situation of a developing country. Of course, there is injustice in this picture. France was not alone in his case and some of his reactions have lived up to it. After the initial mistakes, the vaccination campaign went rather well. But, the part of truth which exists in this formula of great downgrading should not be ignored either.

France, therefore, found itself dependent on foreigners to the point that the masks delivered from China were, in April 2020, guarded by impressive police forces. But this dependence and downgrading has manifested itself in other areas. They range from medical drug shortages to the shutdown of auto factories in the summer of 2021 due to semiconductor shortages.

We must recognize Emmanuel Macron and his government for having taken the measure of this downgrading. One of its first reactions was to recreate, in September 2020, a High Commission for Planning. He also presented a year later, in a speech on October 12, 2021, the outline of a plan for 2030. One might think that these initiatives are linked. It doesn’t. Certainly, the word «plan» is frequently cited in this speech. But it is in this general form or plan simply becomes synonymous with project. Emmanuel Macron also quotes the “European plan”, but there again there is an abuse of language. The “plan” he speaks of is just a funding program, moreover not very rigorous in its methods and far too limited in its resources. It should be noted that the High Commissioner for Planning is mentioned only once, in the preliminary greetings to the speech.

The HCP finds itself much more in coordinating various forecasting bodies, such as France-Stratégie, than in the function which should be its own, defining priorities and implementing, in permanent consultation with administrations and companies, the means to reach them. However, one should not minimize the foresight work that the HCP provided in its first year of existence. Note no. 2 on vital products and strategic sectors is a prospective work of good standard. It reads: “We discovered that the supplies of essential drugs for treatment and for the health of our compatriots were called into question (...) We checked that the stocks did not exist or were not sufficient. But this risk can also be proven for other products essential to the agricultural world, to the industrial world or to our life in society. These risks of scarcity reveal our country’s dependence on distant production chains, dependent on decisions over which we have no control”.

In the introduction signed by François Bayrou, this note calls for the development of mobilization plans so that, in the event of a new crisis, the disposal of products and vital equipment could be ensured. It calls too for a reflection on the definition of strategic sectors on which depends the national defense but also the critical supplies necessary for the sovereignty of France and its security. The note analyzes France’s dependence on drugs on the basis of a former Senate report [121]. It clearly shows the problem posed by deindustrialisation in France.

The energy transition. The debate on planning is now resurfacing, and it is resurfacing in particular around the ecological question of energy transition. Several journals have devoted issues to it in recent months [122]. Coming thirty years after the collapse of the USSR and the Soviet bloc, and what could be considered the collapse of one of the traditions of planning, even if the latter had not been relevant for the France, this return of planning to the center of the debate is particularly significant. Indeed, the use of planning will most likely be required if we are to face the climate emergency and truly lead an energy transition leading to carbon neutrality. The question of transition processes, in particular when they involve deep social, technical and economic transformations [123], requires articulated policies that only planning allows [124]. But, the risk of seeing this process being conducted in an undemocratic manner is real [125]. From this point of view, the French model of planning through consultation provides guarantees for democratic procedures. The ability to conduct the debate that will lead to an order of priority in a transparent manner is a guarantee that the energy transition is not captured by vested interests [126].

Laure Després, a former specialist in Soviet economics, wonders about the need for planning to achieve the ecological transition [127]. This was the theme of one of his recent previous articles [128]. Laure Després starts from the observation of the inability of “green growth” strategies, at least in their current form, to respond to ecological and social cri-
The inconsistency between the various documents that have been published on this subject in recent years in France shows, according to her, the need to establish a comprehensive procedure. Effective planning should guide investments, and therefore question their financing procedures and therefore break with the neoliberal functioning of the administration. The idea of planning applied to ecological transition [129] is also today defended by Gaël Giraud [130], “who was the former chief economist of the French Agency for Development”.

Another author, Dominique Plihon, starts from the observation that our societies are poorly prepared for ecological and social transition because they suffer from both a problem of temporal inconsistency, between the long-term horizon of the transition and the short horizon for most economic and political actors, and a problem of democratic deficit which hinders the mobilization of society around precisely this objective of ecological transition [131]. Analyzing the question of uncertainty as an endogenous product, as Keynes argued [132], of the decisions of decentralized actors, but also that of the irreversible and cumulative nature of climate change [131], he ended up with the impossibility for market mechanisms to resolve the problem of temporal inconsistency. He then writes: “If they do not have clear information on these future policies, these actors may be led to postpone or abandon their decisions. As economic analysis shows, uncertainty is one of the main obstacles to investment” [131]. He then shows that the French planning model, because it sheds light on the future in order to overcome, or loosen, the constraints of immediacy, would allow the challenges of the medium and long term to be defined.

This model appears particularly well suited to the treatment of ecological transition [131]. Plihon then wrote, about Pierre Massé, who was the author of a fundamental work on planning: [133] “To justify the usefulness of planning, Pierre Massé starts from a critique of the generalized market theory in particular by Gérard Debreu, by showing that all future eventualities cannot be known in advance. This is especially the case for long-term investments, such as the construction of a dam, for which there is no market or price reflecting future services” [131]. In fact, Dominique Plihon uses the terms of the debate between Neurath and von Mises on the subject of planning.

Michel Aglietta and Étienne Espagne have published an article along the same lines [134]. Of particular importance is the article by Aglietta and Espagne. As one of the authors of the Fifi model, Aglietta is uniquely placed to talk about a return of the plan. This article immediately raises the question of planning in the context of the energy transition. In these two important articles, the question of time horizons, how to articulate short and long-term responses, appears to be the driving force behind this return to the plan.

The question remains, however, whether planning could be done at European Union level or whether national planning is possible within the framework of European institutions. There is no doubt that this will be the subject of many future debates.

REFERENCES

1. Voir, Government of India — NITI Aayog, ANNUAL REPORT 2014-15 (Government of India Press, New Delhi, 2015). http://www.niti.gov.in.
2. J. Sapir, “Has the COVID-19 crisis put planning back on the agenda?,” Nauch. Tr. Vol’n. Econ. O-va Ross. 230 (4), 259–274 (2021).
3. W. Andreff, “Edmond Malinvaud et la planification décentralisée,” Revue d’histoire de la pensée économique, No. 9, 43–90 (2020).
4. A. Rudra, Prasanta Chandra Mahalanobis: A Biography (Oxford Univ. Press, London and New York, 1996).
5. R. Savy, “Les pouvoirs économiques exceptionnels,” Pouvoirs, No. 10 (1979).
6. J. S. Ott and L. A. Dicke, The Nature of the Non-Profit Sector (Routledge, New York, 2021), Chap. 4.
7. J. E. Stiglitz, “Markets, market failures, and development,” Amer. Econ. Rev. 79 (2), 197–203 (1989), Papers and Proceedings of the Hundred First Annual Meeting of the American Economic Association.
8. S. Borenstein, “The trouble with electricity markets: understanding California’s restructuring disaster,” J. Econ. Perspective 16 (1), 191–211 (2002).
9. J. Percebois, “Wright. Electricity consumers under the state and the private sector: comparing price performance of the French and UK electricity industries, 1990–2000,” Utilities Policy, No. 10, 167–179 (2001).
10. G. L. S. Shackle, Expectation in Economics (Cambridge Univ. Press Cambridge, 1949).
11. H. A. Simon, “Bounded Rationality,” in The New Palgrave: A Dictionary of Economics, Ed. by J. Eatwell, M. Murray and P. Newman (Macmillan, London, 1987), Vol. 1, pp. 266–267.
12. H. A. Simon, “Rationality as process and as product of thought,” Amer. Econ. Rev. 68 (2), 1–16 (1978).
13. O. Neurath, in War Economy. Economic Writings — Selections 1904–1945, Ed. by T. Uebel and R. Cohen (Kluwer, New York, 2005), pp. 12, 193
14. H. A. Simon, “From Substantive to Procedural Rationality,” in 25 Years of Economic Theory, Ed. by T. J. Kastelein, S. K. Kuipers, W. A. Nijenhuis, and G. R. Wagenaar (Springer, Boston, MA, 1976), pp. 65–86.
15. F. Laville, “Foundations of procedural rationality: cognitive limits and decision processes,” Econ. Philos. 16 (1), 117–138 (2000).
16. J. W. Dean, Jr. and M. P. Sharifman, “Procedural rationality in the strategic decision-making process,” P. J. Manag. Stud., No. 30, 587–610 (1993).
17. P. Massé, Le Plan ou l’Anti-hasard (Gallimard, NRF Idées, Paris, 1965), in F. Perroux, L’Écono-
mie du XX Siècle (Presses Universitaires de Grenoble, Grenoble, 1961).
18. F. Perroux, Ed. L’Economie du Xxe Siècle (Presses Universitaires de Grenoble, Grenoble, 1961).
19. Fondation Nationale des Sciences Politiques (Paris) and Institut d’Etudes Politiques de l’Université de Grenoble. La Planification comme Processus de Decision. Cahiers de la Fondation Nationale des Sciences Politiques Paris (Armand Colin, Paris, 1965).
20. J. Sapir, Les Troux Noirs de la Pensée Économique (Albin Michel, Paris, 2000).
21. L. Von Mises, “Economic Calculation in the Socialist Commonwealth,” in Collectivist Economic Planning, Ed. by F. A. Hayek (Routledge, London, 1935).
22. F. A. Hayek, Collectivist Economic Planning (Routledge, London, 1935).
23. O. Lange, “On the Economic Theory of Socialism,” Rev. Econ. Stud. 4, (1–2) (1936).
24. O. Lange, “The Role of Planning in a Socialist Economy,” in Papers in Economics and Sociology (PWN and Pergamon Press, Warsaw and London, 1970).
25. A. P. Lerner, “A note on socialist economies,” Rev. Econ. Stud. 4 (1) (1936).
26. A. P. Lerner, “Statics and dynamics in socialist economies,” Econ. J. 47 (1937).
27. J. O’Neill, “Who Won the Socialist Calculation Debate,” History of Political Thought 17 (3), 431–442 (1996).
28. F. A. Hayek, “Prices Expectations, Monetary Disturbances and Malinvestments,” in Profit, Interest and Investment (Routledge, London, 1939), p. 141.
29. Monetary Theory and the Trade Cycle (Jonathan Cape, London, 1933).
30. J. Sapir, “Planning in capitalist economies: On the example of military economies,” Questions Polit. Econ. 27 (3), 120–136 (2021).
31. E. Barone, “Ministro della Produzione nello Stato Collettivista,” Giornale degli Economisti, September-October, 267–293, 392–414 (1908), re-published in Le Opere Economiche (Zanichelli, Bologna, 1936), Vol. 1, pp. 229–297.
32. The Economics of World War I, Ed. by S. Broadberry and M. Harrison (Cambridge Univ. Press, Cambridge, 2005).
33. G. Hardach, “The First World War, 1914–1918,” in History of the World Economy in the Twentieth Century (Univ. of California Press, Berkeley and Los Angeles, 1977), No. 2.
34. C. P. Vincent, The Politics of Hunger: The Allied Blockade of Germany (1915–1919) (Ohio Univ. Press, Athens, OH, 1985).
35. M. Siney, The Allied Blockade of Germany (1914–1916) (Univ. of Michigan Press, Ann Arbor, MI, 1957).
36. M. M. Farrar, Conflict and Compromise. The Strategy, Politics and Diplomacy of the French Blockade (1914–1918) (Mouton, The Hague, 1974).
37. G. Dallas, 1918: War and Peace (John Murray, London, 2000).
38. P. Nivet, La France Occupée. 1914–1918 (Paris, Armand Colin, 2011).
39. A. Hennebicque, “Albert Thomas et le régime des usines de guerre (1915–1917),” in 1914–1918. L’autre Front, Ed. by F. Fridenson (Editions Ouvrières, Paris, 1977).
40. D. Barjot, “Entreprises et entrepreneurs face à l’effort de guerre, électricité et travaux publics (1914–1918),” in Deux Guerre Totales, 1914–1918, 1939–1945. La Mobilisation de la Nation, Ed. by D. Barjot (Economica, Paris, 2012), p. 202.
41. Étienne Clémentel 1864–1936: Politique et Action Publique sous la Troisième République, Ed. by M.-C. Kessler and G. Rousseau (P.I.E-Peter Lang S.A. Soll. “France contemporaine,” Bruxelles, 2018).
42. G. B. Clarkson, Industrial America in the World War (Houghton Mifflin, New York, 1923).
43. B. M. Baruch, American Industry in the War (Prentice Hall, New York, 1941).
44. H. Rockoff, Drastic Measures: A History of Wage and Price Controls in the United States (Cambridge Univ. Press, New York, 1984).
45. F. W. Taussig, “Price-fixing as seen by a price-fixer,” Quarterly J. Econ. 33 (2), 205–241 (1919).
46. K. A. Kerr, “Decision for federal control: Wilson, McAdoo, and the railroads, 1917,” J. Amer. History 54 (3), 550–560 (1967).
47. W. J. Breen, Uncle Sam at Home: Civilian Mobilization, Wartime Federalism, and the Council of National Defense (1917–1919) (Greenwood Press, Westport CT, 1984).
48. R. E. Smith, The Army and Economic Mobilization (Center of Military History, United States Army, US-GPO Washington D.C., 1959).
49. H. W. Thatcher, Planning for Industrial Mobilization (1920–1940) (General Administrative Services Division, Office of the Quartermaster General, US-GPO, Washington D.C., 1948).
50. A. S. Milward, War, Economy and Society. 1939–1945 (Univ. of California Press, Berkeley and Los Angeles, 1979), p. 100.
51. P. R. Gregory and R. C. Stuart, Comparing Economic Systems in the Twenty-First Century (Houghton Mifflin Boston, 2003).
52. J. N. Bhagwati and P. Desai, India: Planning for Industrialization (Oxford Univ. Press London, 1970).
53. S. Badhuri and N. Yangla, “Seventy five years of national planning committee (1938–2013): A re-collection,” Science and Culture 81 (3–4), 66–70 (2015).
54. C. Bettelheim, L’Inde Indépendante (Colin, Paris, 1962).
55. J. P. Haithcox, Communism and Nationalism in India (Princeton Univ. Press, Princeton, 2015).
56. Meghnad Saha in Parliament, Ed. by S. J. Chatterjee and A. Gupta (The Asiatic Society, Calcutta, 1993).
57. M. Visvesvaraya, Planned Economy for India (The Bangalore Press, Bangalore, 1936).
58. P. Thakurdas, A Brief Memorandum Outlining a Plan of Economic Development for India (2 Vols.) (Penguin, London, 1945).
59. V. K. Ananth, “Globalization and Communalism: Locating Contemporary Political Discourse in the Context of Liberalization,” in Religion, Power and Violence: Expression of Politics in Contemporary Times, Ed. by R. Puniyani (SAGE, New Delhi, 2005), pp. 44–67.

60. V. Chibber, Locked in Place: State-building and Late Industrialization in India (Princeton Univ. Press, Princeton, 2003), p. 88.

61. R. Komiya, “Planning in Japan,” in Economic Planning — East and West, Ed. by M. Bornstein (Harvard University Press, Cambridge, MA, 1975), pp. 189–235.

62. D. I. Okimoto, “Political Context,” in Competitive Edge. The Semiconductor Industry in the US and Japan, Ed. by D. I. Okimoto, T. Sugano, and F. B. Weinstein, (Stanford University Press, Stanford, CA, 1984), p. 98.

63. T. Morris-Suzuki, A History of Japanese Economic Thought (Routledge, London, 1989), pp. 99–100.

64. N. Kapur, Japan at the Crossroads: Conflict and Compromise after Anpo (Harvard University Press, Cambridge, MA, 2018).

65. J. Maiolo, Cry Havoc: How the Arms Race Drove the World to War, 1931–1941 (Basic Books, New York, 2010), p. 29.

66. G. C. Allen, Japanese Industry: Its Recent Development and Present Condition (Inst. of Pacific Relations, New York, 1940).

67. M. Jansen, J. W. Hall, M. Kanai, and D. Twitchett, The Cambridge History of Japan (Cambridge University Press, Cambridge, 1989).

68. Japan’s War Economy, Ed. by E. Pauer (Routledge, London, 1999).

69. P. Duus and D. Okimoto, “Comment: Fascism and the history of pre-war Japan: The failure of a concept,” J. Asian Stud. 39 (1), 65–76 (1979).

70. T. A. Bisson, Japan’s War Economy (International Secretariat, Institute of Pacific Relations, The Macmillan Co., New York, 1945), pp. XV, 267.

71. J. B. Cohen, Japan’s Economy in War (Univ. of Minnesota Press, Minneapolis, 1949)

72. J. Mimura, “Japan’s new order and greater East Asia co-prosperity sphere: Planning for empire,” Asia-Pacific J. Japan Focus 9 (49), No. 3 (2011).

73. J. W. Dower, Japan in War & Peace (The New Press New York, 1993).

74. R. F. Kuisel, Le Capitalisme et l’État en France, Chap. I: “Les Brouillons de la Période de Vichy” (Gallimard, Paris, 1984).

75. O. Dard, “Voyage à l’intérieur d’X-crise,” Vingtième Siècle, revue d’histoire, No. 47, 132–146 (1995).

76. M. E. Fischman, Lendjele, De X-Crise (1931–1939) à X-Sursaut (2005–?). L’apport des Polytechniciens à la réflexion sur le rôle de l’État dans la vie économique. https://halshs.archives-ouvertes.fr/halshs-00269386/document.

77. R. F. Kuisel, “Vichy et les origines de la planification économique (1940–1946),” Le Mouvement Social, No. 98, 77–101 (1977).

78. C. Andrieu, Le Programme Commun de la Résistance (Éditions de l’Erudit, Paris, 1984).

79. P. Mioche, “La planification comme ‘Réforme de structure’: l’action de Pierre Mendès-France, de 1943 à 1945,” Histoire, économie et société. 1e année, No. 3, 471–488 (1982).

80. H. Ehrmann, La Politique du Patronat Français (Armand Colin, Paris, 1959).

81. E. R. Maxïmin, “The United States and the French left, 1945–1949: The view from the State Department,” J. Modern History 19, 729–74 (1984).

82. M. Margairaz, “Autour des accords Blum-Byrnes. Jean Monnet entre le consensus national et le consensus atlantique,” Histoire, économie et société. 1e année, No. 3, 439–470 (1982).

83. M.-L. Djelic, “Genèse et fondements du plan Monnet: l’inspiration américaine,” Revue Française d’Etudes Américaines, No. 68, 77–86, 80 (1996), Sexualités: expression et répression.

84. E. Zaleski, La Planification Staliniennne. Croissance et Fluctuations Économiques en URSS (1933–1952) (Economica, Paris, 1984).

85. A. Nove, L’Économie Soviétique (Economica, Paris, 1981).

86. R. Hutchings, The Structural Origins of Soviet Industrial Expansion (Macmillan, London, 1984).

87. A. Gerschenkron, Economic Backwardness in Historical Perspective (The Belknap Press of Harvard Univ. Press, Cambridge, MA, 1962), pp. 5–30.

88. J. M. Keynes, How to Pay for the War: A Radical Plan for the Chancellor of the Exchequer (Macmillan, London, 1940).

89. P. R. Tcherneva, Keynes’s Approach to Full Employment: Aggregate or Targeted Demand?, Levy Economics Institute Working Paper, No. 542, Bard College, The Levy Economics Institute, 2008.

90. J. A. Kregel, “The effective demand approach to employment and inflation,” J. Post Keynesian Econ. 10 (1), 133–145 (1987).

91. A. Gupta, “India’s nuclear energy programme: Prospects and challenges,” Strategic Analysis 35 (3), 373–380 (2011).

92. K. Siddiqui, “Globalisation and Neoliberal Economic Reforms in India: A Critical Review,” in Globalization in India: New Frontiers and Emerging Challenges (Prentice Hall India, New Delhi, 2010), pp. 219–243.

93. V. Negi, Where have all the farmers gone! The story of agriculture and the small Indian farmer, Focus on the global South, India, 2014. http://focusweb.org/sites/www.focusweb.org/files/Where%20have%20all%20the%20small%20farmers%20gone.pdf.

94. M. Baba, “Le Caractère de la Planification Economique au Japon et le Rôle Tenu par le Gouvernement,” in La Planification en France et au Japon, Les Collections de l’INSEE, Série C. No. 61, Ed. by Ch. Sautter and M. Baba (INSEE, Paris, 1978), No. 261, Tab. 1, p. 37.

95. R. Katz, Japan, The System That Soured (MF Sharpe, Armonk, New York and London, 1998).

96. A. J. Alexander, “Japan’s economy in the 20th century,” JEI report, No. 3 (2000).

97. K. Ohkawa and H. Rosovsky, Japanese Economic Growth (Stanford Univ. Press, Stanford, CA, 1973).
98. A. Maddison, “Standardized Estimates of Fixed Capital Stock: A Six-Country Comparison,” in *Explaining the Economic Performance of Nations* (Edward Elgar Publ. Co, Brookfield, VA, 1995).

99. C. Wolf, Jr., *Economic Planning in Korea* (The Rand Corporation, Santa-Monica, CA, 1962), Paper P-2655.

100. Kae H. Chung, “Industrial progress in South Korea,” *Asian Survey* 14 (3), 439–455 (1974).

101. A. Amsden, *Asia’s Next Giant: South Korea and Late Industrialization* (Oxford Univ. Press, New York, 1989).

102. R. Abdelal, *Capital Rules: The Construction of Global Finance* (Harvard Univ. Press, Cambridge, 2007).

103. J. Sapir, *Souveraineté, Démocratie, Laïcité* (Michalon, Paris, 2016).

104. G. Huff, “What is the Singapore model of economic development?,” *Cambridge J. Econ.* 19 (6), 735–59 (1995).

105. S. Wickham, *French Planning: Retrospect and Prospects* (Princeton Univ. Press, Princeton, NJ, 1990).

106. C. P. Kindleberger, “Complexity and transition management,” *J. Industr. Ecol.* 13 (2), 184–196 (2009).

107. J. Hacket and A-Marie Hackett, *Economic Planning in France* (Harvard Univ. Press, Cambridge, MA, 1963).

108. J. Sheahan, *Promotion and Control of Industry in Post-War France* (Harvard Univ. Press, Cambridge, MA, 1963).

109. J. Estrin and P. J. Holmes, “The performance of fixed French planning 1952–1978,” *Econ. Planning* 16, 1–19 (1980).

110. Sénat. Rapport de la mission d’information sur la pénurie de médicaments et de vaccins (Yves Daudigny, président, Jean-Pierre Decool, rapporteur), September 27, 2018. https://www.senat.fr/commission/misons/penurie_de_medicaments_et_de_vaccins/index.html.

111. Sénat. Rapport de la mission d’information sur la pénurie de médicaments et de vaccins (Yves Daudigny, président, Jean-Pierre Decool, rapporteur), September 27, 2018. https://www.senat.fr/commission/misons/penurie_de_medicaments_et_de_vaccins/index.html.

112. M. Aglietta, *Avant-propos à la Deuxième Edition,* in *Régulation et Crises du Capitalisme* (Calmann-Lévy, Paris, 1982), 2ème édition.

113. L. Després, “Eine planifizierung écologique et sociale: un impératif!,” *Actuel Marx* 2019/1 (65) (2020), Issue coordinated by Cédric Durand and Razmig Keucheyan, Les Possibles, No. 23 (2020).

114. J. Rotmans and D. Loorbach, “Complexity and transition management,” *J. Industr. Ecol.* 13 (2), 184–196 (2009).

115. J. Grin, J. Rotmans, and J. Schot, *Transitions to Sustainable Development; New Directions in the Study of Long Term Transformative Change* (Routledge, New York, 2010).

116. J. Gaede and J. Meadowcroft, “A question of authenticity: Status quo bias and the International Energy Agency’s World Energy outlook,” *J. Envr. Policy & Planning,* 1–20 (2015).

117. F. Cusset, *La Décennie. Le Grand Cauchemar des Années 1980* (La Découverte, Paris, 2006).

118. R. Abdelal, *Capital Rules: The Construction of Global Finance* (Harvard Univ. Press, Cambridge, 2007).

119. S. Wellisz, “Economic planning in the Netherlands, France and Italy,” *J. Polit. Econ.* 68 (3), 252–283 (1960).

120. S. Wellisz, “Economic planning in the Netherlands, France and Italy,” *J. Polit. Econ.* 68 (3), 252–283 (1960).

121. J. Sapir, *Souveraineté, Démocratie, Laïcité* (Michalon, Paris, 2016).

122. “La planification aujourd’hui,” *Actuel Marx* 2019/1 (65) (2020), Issue coordinated by Cédric Durand and Razmig Keucheyan, Les Possibles, No. 23 (2020).

123. J. Rotmans and D. Loorbach, “Complexity and transition management,” *J. Industr. Ecol.* 13 (2), 184–196 (2009).

124. J. Grin, J. Rotmans, and J. Schot, *Transitions to Sustainable Development; New Directions in the Study of Long Term Transformative Change* (Routledge, New York, 2010).

125. C. M. Hendriks, “Policy design without democracy? Making democratic sense of transition management,” *Policy Sci.* 42 (4), 341–368 (2009).

126. J. Gaede and J. Meadowcroft, “A question of authenticity: Status quo bias and the International Energy Agency’s World Energy outlook,” *J. Envr. Policy & Planning,* 1–20 (2015).

127. L. Després, “Eine planifizierung écologique et sociale: un impératif!,” *Actuel Marx* 2019/1 (65), 103–118 (2019).

128. L. Després, “La transition écologique. Vers un capitalisme régulé ou vers un changement de système économique,” *Van Lang A. Penser et Mettre en Œuvre les Transitions Écologiques: Colloque, 2015* (Mare & Martin, 2018) pp. 55–73.

129. A. Delmas, “Planification écologique: La formule magique de Mélenchon,” *Liberation,* 8 février 2017.

130. J. Grin, J. Rotmans, and J. Schot, *Transitions to Sustainable Development; New Directions in the Study of Long Term Transformative Change* (Routledge, New York, 2010).

131. D. Plihon, “La planification écologique: Une approche institutionnalisée,” *Les Possibles,* No. 23, 88–96 (2020).

132. J. Rapports, “A treatise on probability, republié,” in *Collected Writings* (Macmillan, London, 1973), Vol. 8, Chapt. 6.

133. L. Després, “La planification écologique: Une approche institutionnalisée,” *Les Possibles,* No. 23, 88–96 (2020).

134. M. Aglietta and E. Espagne, “L’ardente obligation’ de l’écologie politique,” *L’Economie Politique,* No. 89 (2021).