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Markets, models and planning: the Norwegian experience

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No 11	Kari Due-Andresen Tax evasion and labour supply in Norway in 2003: Structural models versus flexible functional form models. 44 pp.
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No 09	Kjell Arne Brekke, Karine Nyborg and Mari Rege The Fear of Exclusion: Individual Effort when Group Formation is Endogenous. 23 pp.
No 08	Geir B. Asheim and Bertil Tungodden A new equity condition for infinite utility streams and the possibility of being Paretian. 14 pp.
No 07	Hilde Bojer Income inequality and the economic position of women in Norway 1970 – 2002. 24 pp.
No 06	Øystein Jørgensen, Tone Ognedal and Steinar Strøm Labor supply when tax evasion is an option. 30 pp.
No 05	Rolf Golombek and Michael Hoel The Kyoto agreement and Technology Spillovers. 22 pp.
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Markets, models and planning: the Norwegian experience

by

Olav Bjerkholt

Abstract

After World War II economic policy in Europe comprised considerable elements of planning. The paper discusses how this shift was related to the conceived failure of the free enterprise economy to provide full employment in the interwar period and to the war experience. The Norwegian post-war planning had a more integrated and comprehensive character and a more structured format than in most other countries in Western Europe. Some major aspects of the Norwegian planning system and the models developed to support it are discussed, with particular emphasis on the roles played by key economists.

Keywords: Economic planning; planning models; national budgeting; Marshall Plan;

JEL-Codes: A11; O21; P41;

1. Introduction[*]

The topic of "markets vs. planning" can be dealt with as a purely theoretical topic based upon a general equilibrium representation of the economy, perhaps with market failures, external effects, bargaining, or other imperfections, and use of devices of economic planning, e.g. price mechanisms and other mechanism designed for planning purposes, possibly considering problems created by agents having rational expectations, time consistency problems and other limits to planning.

Rather contrary to that I will deal with these topics within a concrete historical context, which is that of the economic policy in post-war Norway. The setting is the shift from the interwar free enterprise system, with limited government intervention and not too well functioning markets via wartime controls and regulation towards a system of comprehensive economic planning, without large-scale nationalization of the means of production. The presentation will have a historical narrative with some key actors, some of them famous, and not too much theoretical discussion. Some of the referenced works offer a more elaborate and detailed presentation.

A similar shift towards more government intervention and planning took part in several countries. Perhaps it could be ventured that economic planning in Norway had a more integrated and comprehensive character and a more structured format than in most other countries in Western Europe, but the drift went in the same direction, particularly in the early years.

Why did this happen? Was it influenced by theoretical discussions? Was it the result of a political shift towards the left with more planning oriented parties coming to power? Was it in some way the outcome of a reaction to the war? It could be some contribution from each of these, but in my view it was above all a reaction to the dismal failure of the economic system of the interwar years. But then, what was the role of economists in this process? Who called the shots, who gave the signals?

There had been indeed theoretical discussions on the international arena of the possibilities of more or less perfectly functioning planning systems, based upon competitive principles within a general equilibrium framework, but these did not seem to have exerted much influence in Norway. There was indeed a political swing to the left after liberation in Norway, as also happened in other countries, which undoubtedly nourished the interest in pursuing alternatives to the poorly functioning capitalistic system of the pre-war years, a situation that no one wanted back. The ruling political force in post-war Norway, the Labour Party, after it had shed its revolutionary past in the 1920s, had embraced national planning as part of a democratic development. During its government form 1935 it had promoted a more comprehensive role for the state.

The topic is really too big for a single lecture but I will thus touch upon why comprehensive planning became the chosen way of conducting economic policy, in this context I deal with the role and impact of the Marshall Plan. The concrete embodiment of

[*] Lecture at Norwegian School of Business Administration and Economics in course MET510 Vitenskapsteori, 13 May 2005.

the planning aspects of economic policy was shaped differently in different countries, but I have to limit the discussion to cover only Norway and only main features. I will try to get the setting of post-war economic policy reasonably clear and then discuss some aspects of the design of economic planning and policy. I will mention some key economists who contributed in this setting, and the narrative will be a mix of economic history and the history of Norwegian economics. Finally, I will say something about what was achieved in terms of the results of economic policy, point out elements of economic policy, which survived beyond what we can call the economic planning period in post-war economic policy, and make some further remarks on the more recent theoretical discourse on the possibilities and limitations of planning.

2. The dismal failure of the economy in the interwar period.

Let us first have a bird's-eye view of the dominant features of economic development in the industrial world before and after World War II (WWII). Table 1 below put the key figures in the perspective of the entire time span from 1870 to 1990.

Table 1. Average growth rates for 16 industrialized countries.*

Growth rates %	**1870-1913**	**1913-1950**	**1950-1973**	**1973-1990**
GDP	2.5	2.0	4.9	2.6
GDP/cap	1.4	1.2	3.8	2.1
Real capital	3.4	2.0	5.8	4.2
Export volumes	3.9	1.0	8.6	4.7
Unemployment %	4.5	7.5	2.6	5.7
Inflation %	0.4	-0.7	4.1	7.3

*** The 16 countries are Australia, Belgium, Canada, Denmark, Finland, France, Italy, Japan, the Netherlands, Norway, Great Britain, Sweden, Switzerland, Germany, Austria, USA.**
Kilde: A. Maddison: *Dynamic Forces in Capitalist Development*, Oxford: Oxford University Press, 1991.

Look closely at these numbers, they may all seem small, but they have massive significance as the averages of the overwhelming part of the industrial world for long spans of time. The shift downwards form 1870-1913 to 1913-1950 is very marked in these numbers, in particularly with regard to trade. The shift from 1913-1950 to the post-war period of 1950-1973 is even more distinct. Look at the dramatic shifts in the growth of real capital and in exports. The individual countries naturally followed somewhat different paths. The interwar figures cover the miserable record of the UK economy in the 1920s, coinciding with the roaring twenties of the US economy. Common to most countries was the massive depression that set in worldwide from 1930.

It was a malfunctioning of the economy both at national level and international. Of course, these were not separate developments. The international division of labour had progressed much along with industrialization throughout the 19th century. When World War I (WWI) interrupted the capitalistic world system, Europe – reconstituted after the collapse of the empires – became beset with protectionism and beggar-thy-neighbour policies, which most severely constrained the effort of maintaining macroeconomic stability and employment at the national level and yielded miserable results.

We note in passing that there was before WWII relative few institutions establish to help manage the world economy. The League of Nations was much concerned with the economic problems, it arranged conferences and hired economic experts, but did not achieve much in terms of systemic changes. It also sponsored theoretical and empirical studies on the causes of business cycles (which comprised the work for which Jan Tinbergen was awarded the first Nobel Prize in economics 30 years later). One might turn the question around and ask how the world economy could perform so much better before WWI. We cannot elaborate on this here, merely point to part of the answer as beingthat the world economy was until then very much dominated by UK's strong economic position, dominant in technology and financial power and also in production capacity until rivalled by Germany and the United States shortly before WWI. Many of the countries, which took part in this glorious period of free trade, were still at a very early stage in a modern capitalistic development. It was the expansive phase of a new economic order. WWI marked the end of this period and also the end of Britain's dominant position as well as its stabilizing influence over the world economy.

To explain the causes of the Great Depression, has long been a big issue in economic history on which there has never become complete agreement. We note in passing the opinion of John Maynard Keynes that "under the system of domestic *laissez-faire* and an international gold standard … there was no means open to a government whereby to mitigate economic distress at home except through the competitive struggle for markets". Therefore, the international relations could with employment problems easily degenerate to trade wars and protectionism. Only "if nations can learn to provide themselves with full employment by their domestic policy," would it be possible for every country to benefit fully from the international division of labour.[1]

The interwar period was also a period of very intense ideological struggle. The Russian Revolution in 1917 led after some years to the consolidation of the Soviet economy and the beginning of its sequence of five-year plans undertaken within a largely autarchic economic system, also a society which was quite sealed off from the rest of the world. The Soviet economic performance, known primarily from official Soviet sources and eyewitness reports, impressed many with regard to what could be achieved by planning, as compared to the misery of Western Europe economic performance. Also the Nazi regime in Germany achieved from 1933 impressive economic results, as compared to the record of the Weimar republic.

But also for more legitimate reasons than inspiration from totalitarian regimes ideas emerged in many countries about the need for planning of the economy in view of the perceived failure of the market economy. It is in this context we can place the theoretical discussion on "planning vs. market" as set out by the Polish economist Oskar Lange, in the mid-1930s. Lange, who studied under Schumpeter at Harvard at the time and did no secret of his socialist conviction, wrote two articles in 1936-37 as an answer to the

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[1] Quotes from Keynes (1936), p.382.

Austrian economist Ludwig von Mises who had asserted that planning could not work.[2] Lange opened his first article by sarcastically thanking von Mises, whose anti-socialist views were quite explicit, as the *advocatus diaboli* of the socialist cause for having forced socialists to recognize the importance of an appropriate system for guiding the allocation of resources in a socialist economy, and proposed a statue of von Mises to be placed in the great hall of the Central Planning Board of the socialist state.

Ludwig von Mises had asserted in an article in 1920 that economic calculation was impossible in a socialist economy, which thus would not be able to allocate resources efficiently. The discussion took place within the framework of Walrasian general equilibrium, within which, these issues, as Lange drew attention to, had been discussed earlier by Vilfredo Pareto and Enrico Barone.[3] Lange was countering the criticism of von Mises and others by arguing and discussing in some detail that the central planning board of a socialist economy could practice rules for setting prices that would mimic that of a perfectly functioning market and thus achieve the corresponding allocational efficiency, with income distribution set according to socialist norms, of course.

Lange's articles became well known, but in retrospect the theoretical argument got little contact with real world problems. It had no relevance for Soviet planning, which did not use price mechanisms, neither did it have much similarity with the post-war planning in Poland to which Lange returned after World War II to serve as member of the State Council with some responsibility for the Central Planning Board.[4]

Of greater importance for post-war planning than the discussions along Lange-Mises lines was the main contribution to macroeconomics in the interwar period, *The General Theory of Employment, Interest and Money* by John Maynard Keynes.[5] It gave to many the impression that the macroeconomic problem of avoiding depressions and volatile cycles in general was solved by following the prescriptions of fiscal policy in Keynes' book. To many young economists it became a kind of revelation, or as Paul Samuelson expressed it, an "intoxication".

Keynes had in various places of his writings given some support for more comprehensive planning. This was a more obscure side of Keynes and somewhat different statements can be found in different sources. The last chapter of *General Theory* has often been quoted on this point. Here one finds Keynes expressing the idea that the amount of capital in the economy could easily increase to such a level that the marginal efficiency and hence the return on capital would fall to become very low, because the demand for capital was strictly limited. It was a prediction that turned out to be dead wrong, but if it had been true, it would, in Keynes' words, have implied the end of the "rentier aspect of

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[2] Lange's articles appeared originally in *Review of Economic Studies* 4 , No.1 (Oct.1936) & No.2 (Feb. 1937). The articles were reprinted with additions and some changes in Lange (1938).

[3] V. Pareto: *Cours d'économie politique*, Lausanne, 1897, Vol. II, pp.364ff ; V. Pareto: *Manuel d'économie politique*, Paris, 1910, pp.362-364 ; E. Barone: Il ministerio della produzione nello stato collettivista, *Giornale degli Economisti*, 1908.

[4] Lange contributed in the 1930s and 1940s to many of the theoretical issues of the day, including also other contributions economic planning. He was among relatively few who had profound knowledge both of Marxist economics and Western academic economics (neoclassical theory).

[5] Keynes (1936). The book was reprinted twice in 1936 and again in 1939, 1942, 1946, 1947 and many times after that. It was also translated into many languages, including a Swedish edition which was reading Norway.

capitalism", or more bluntly: "the euthanasia of the rentier". This could be read as a statement of the end of capitalism, if one considered the profit motive as the essential part of capitalism, and not merely the fact that capital is used in production.[6]

Keynes formulation in this chapter gave considerable support to the idea of managing an economy by means of central controls (he did not use the term "planning"). The government not only could "exercise a guiding influence" over consumption through taxation, the demise of the rentier capitalist meant that "comprehensive socialization of investment will prove the only means of securing an approximation to full employment." This sentence can be read as an outright support for nationalization, but a careful reading reveals that Keynes made various caveats and does not support such an interpretation. Furthermore, Keynes pointed out that if the macro economy is managed skillfully, it will restore the economy to validate the applicability of neoclassical theory (which Keynes calls "classical theory"), and hence its advantages with regards to efficiency and decentralization.

Thus, Keynes propounded the need for government control at macro level over consumption as well as investment, although he admitted it would to his predecessors in the 19th century as well as his contemporary American financiers be a "terrific encroachment on individualism", because it was the only practicable means of avoiding the "destruction of existing economic forms in their entirety" and "the condition of the successful functioning of individual initiative".[7]

3. From war to peace: expectations and perspectives

The Second World War was, needless to say, a shattering experience in Europe. Norway, occupied for five years by Germany, got relatively easy out of the war in human terms, compared to a number of other nations. Economically it lost a part of its accumulated pre-war wealth in terms of real capital and, in addition also the growth it could have had in the war years.

The only two European countries undefeated in World War II, United Kingdom and the Soviet Union, suffered enormous losses, in financial, human and real capital terms. It added to the devastating experience of war that it took place only two decades after World War I. We cannot gauge the impact of the European war experience for the course events took after WWII, but it should not be underestimated. There is e.g. certainly a strong argument for considering the emergence of the European Union 40 years later, ultimately, as an outcome of this experience.

For our more limited purpose we will point to two commonly held opinions in the immediate aftermath of the WWII, which can be regarded as influenced by the experience of the world wars.

The first was the expectation for the immediate post-war period. It was influenced by the traumatic memory of the immediate post-war development after of World War I, which

[6] Keynes (1936), p.376. Although Keynes was not a Marxist, the similarity with Marx' prediction of a falling rate of interest as the beginning of the end of capitalism, is striking. In Marxist terminology the "euthanasia of the rentier" was even more bluntly stated as, "the liquidation of the capitalist class".
[7] Quotes in this and previous paragraph, Keynes (1936), pp.378-380.

was a short boom, followed by a severe recession, which was only the ouverture to the Great Depression, which hit most countries around 1930. A similar post-war recession was not just a fluid expectation, it had by the time of the liberation in 1945 already become the authoritative view of what one could expect. It was mediated in Norway primarily by the book *Varning för fredsoptimism* ('Warning Against Peace Optimism') by the future Nobel laureate Gunnar Myrdal.[8] It was also a widespread view in USA. There is no doubt that this expectation influenced policy. The avoidance of a repeated experience may to some degree be related to these expectations and efforts to counteract them, both at national and international level.

The second opinion that arose from the war was that government planning and management of the economy in war time worked very successfully. The nations at war, primarily United States and United Kingdom, had the production apparatus of the economy to a large extent run by the government for maximum mobilization of resources for the war effort. This was particularly true for Britain whose exposure to war, destruction and even invasion also was much greater. The management of the war economies of USA and UK was conducted also by use of embryonic national accounting and Keynesian inspired macro economic policies, to which was added, particularly for UK, more traditional wartime remedies as rationing, price controls and other regulations. In UK Keynes was strongly involved in this effort assisted by two future Nobel laureates, Richard Stone and James Meade. (Planning certainly worked for the German war machine too, but German experiences were for obvious reasons anathema in this regard.) In Britain the mobilization of resources for the war had been immensely successful, but also very costly. Financial resources had been depleted and the production capacity directed away from the exports that was necessary to pay for the imports the United Kingdom needed. It is on this background that the view emerged, as set out in succinct form by Franks (1947), that a planned economy not only was a good thing, as compared to the alternative known from the interwar years, but that it was an inevitable and unavoidable option for running the British economy. We shall look at some of Franks' arguments below.[9]

United States was stronger than ever in economic power in absolute terms, and even more in relative terms. In distinction from what happened after the end of WWI USA was prepared to contribute substantially to create a better post-war world. A lot of preparations for the post-war world went on through international conferences during the war. United Nations was founded in San Francisco in 1946. USA financed the major share of UN's relief organization UNRRA. The Bretton-Woods agreements in 1944 prepared the ground for the World Bank and the International Monetary Fund, which both became important institutions for the reconstruction. Strong efforts were exerted to

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[8] Myrdal (1944).

[9] Oliver Shewell Franks, born 1905, was educated at Queen's College, Oxford and had been professor of moral philosophy at Glasgow 1937-45 (perhaps the chair that Adam Smith once held?). At the outbreak of World War II he joined the ministry of supply and in 1945 became its permanent secretary. He could thus hardly have been more familiar with United Kingdom's production apparatus at the time when he held the three lectures in 1947. He had by then returned to academic life as provost of Queen's College. Later in 1947 he was called upon to lead the British delegation to the Paris meetings on the Marshall Plan. He became subsequently ambassador extraordinary and plenipotentiary to the United States for the horizon of the Marshall Plan, i.e. until 1952.

create an organization for international trade, ITO, but it was not successful, the outcome became instead a more limited agreement, *General Agreement on Tariffs and Trade* (GATT).[10]

During the war most countries had comprehensive controls and regulations during the war, and prolonged these in the immediate post-war period. In Norway the authority passed from the German occupational authority to Norway's reconstructed democratic government, but many of the wartime regulations and rationings remained in place. The main rationale was that the rationing had worked reasonable well and most commodities were still in very short supply. Furthermore, stability was at stake in the transition to peace. The world economy was not necessarily expected to return, even after a transition period, to any kind of ”normal state”. Not least the experiences from the interwar period were decisive for the view that regulations might be needed on more permanent basis. It was thus a viewpoint held by many that national economies (or even the international economy) must be managed or planned to a considerably degree. In several countries there were early reforms measures in the direction of nationalization of key sectors of the economy, such as transportation, energy, banking, as well as the initiation of comprehensive social and welfare oriented reforms, particularly in health and education, in line with the shift of the political weight to the left.

All countries introduced exchange controls, thus no currencies in Europe were convertible. This implied that trade balances became bilateral, something which put a severe constraint on trade. The trade constraints implied shortages and rationing. As the supplies needed to cover Europe's needs, while the production capacities were under reconstruction, had to come from other continents, the currency shortage was above all a dollar shortage.

It is in this situation we can consider Oliver Franks as a significant witness as to attitudes among civil servants who had lived through the British war administration. Based on his war experience in the ministry of supply directing British industries on what to produce and, of course on his observations of the British economy before the war, he refused to accept that the British economy should return after the immediate post-war years to how it was run and the state it was in, before WWII. On the contrary the war has shown what was needed: “Peace is very different from war and many of the war-time functions and forms of organization will find no application in peace. But the essence of planning and control by the State in relation to productive industry and commercial activity must be the same in war and peace. I think the essential elements are plans consisting of decisions of policy quantitatively expressed in the form of programmes and such measures as in particular circumstances may be necessary to ensure the performance of these programmes.” Beyond expressing this as an opinion from a qualified civil servant he furthermore concluded that “… some form of central planning and control is inevitable” and this should be generally recognized by all political interests such that “the subject is withdrawn … from political controversy.” Of course, peace time regulations and control would be very different from what it was during the war and nationalization was not at all required, but Franks stood firmly by “the general thesis of the inevitability of planning and control by the State as generally directing the policies of industry and trade.” Franks

[10] GATT was many years later replaced by WTO.

gave market mechanisms little or no role in the envisioned government-led planned management of British industry.[11]

His arguments were based on considerations of (a) military security, (b) employment, and (c) the general condition of the world. The point about military security was that, according to Franks, the size and efficiency of industry was the basic war potential. With regard to employment the experiences from the 1930s were that each country would try to promote and protect its employment by trying to be more self-sufficient and this would reduce trade, impoverish the world and be especially damaging to the United Kingdom. Finally, the dislocation and disorganization of the international community of nations was so overwhelming that it would take years to restore normal trading relations. United Kingdom, which needed to increase the volume of its export very much to pay for the imports required to maintain pre-war living standards, could not afford "to do without export programmes and import programmes centrally planned and controlled."[12]

Franks belonged to a British tradition of recruiting civil servants among people of appropriate social background and proper education. What one had studied was of less importance. Hence, a position in the ministry of supply, as in Franks' case, could well be filled with someone with a background in classical Greek and Roman, or, as in Franks, case, a philosopher. This suggests that Franks might have known less economics than he might have benefited from in assessing the necessity and comprehensiveness of planning, in the short and in the longer run. One reaction to Franks' lectures came from James Meade who wrote en entire book to challenge what he perhaps saw as limitations in Franks' understanding of the role of price mechanism.[13]

Meade was in fact also arguing for comprehensive planning. In any planned economy three predominant problems need solution: (1) how to combine the incentive function of the income distribution with distributional targets, (2) how to assure that production and exchange takes place efficiently, and (3) how to provide full-employment without inflation in high-investment economy. Meade argued contrary to Franks, for the use of price mechanisms to achieve these aims. He argued, convincingly, and as we shall see, with relevance also for the Norwegian situation, for restoring marginal incentives by replacing the progressive taxation with a non-progressive tax, combined with universal "social dividends" instead of social benefits and subsidies, radical revision of the inheritance tax, and universal free education. Then all product and factor markets could be relieved of direct interference with the free formation of price. This required, however, the abolition of cartels and other arrangements restraining competition, patent law reform, and the abolition of various labour market constraints on free wage setting. Meade delivered, in distinction from Franks, an economist's arguments.

In this context one may study the viewpoints put forward by Friedrich Hayek, a student of L. von Mises, in *The Road to Serfdom* in 1944.[14] Although it was written some years before Franks' lectures, Hayek's chapter on "The 'inevitability' of planning" may seem

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[11] Quotes from Franks (1947), pp.17-20.
[12] Quote from Franks (1947), p.24.
[13] Meade (1948)
[14] Hayek was Austrian and worked at the famous business cycle institute of Vienna before he moved to England. He was a business cycle theorist of international renown before he moved into a more philosophical realm to defend market economics and liberal values.

to have been written with some foresight to counter Franks' propounded "inevitability of planning and control by the State." The background for Hayek's engagements was the rise of the undemocratic, but to some extent economically successful, regimes of the Soviet Union, Germany and Italy. Furthermore, he was most concerned with countering the argument that the development of industrial technology made the competitive market outdated. He also asserted a connection between comprehensive economic planning and political totalitarianism, and thus the danger of accepting planning. Hayek's 1944 book, which became widely known, had little impact on the immediate post-war policies.[15]

After this glimpse of early post-war thinking in United Kingdom we proceed to consider the early thinking about post-war policies in Norway. Deliberation and discussion on such concerns took place, somewhat isolated from each other, in London, where the cabinet-in-exile was located, but also among Norwegian gathered in Sweden and United States, and naturally also in seclusion within Norway (even inside prison camps). Behind closed curtains in Norway was prepared one of the most constructive contributions to this discussion as the manuscript of book *Hva krigen kostet Norge* ("The Costs of War in Norway"), the written by two young economists Petter Jakob Bjerve (b. 1913) and Odd Aukrust (b.1915), both were graduates from 1941.[16] The book was completed by liberation and got published in September 1945. The content of the book had in its entirety been discussed by a study group of economists, which comprised other war graduates as well as some teachers. Let us first sketch a picture of the setting, which had produced the two authors and also introduce other key persons.

A most important event in the development of Norwegian economics happened in 1931 when Ragnar Frisch returned to Oslo after a year and a half in the United States, instead of accepting a generous offer from Yale University. Frisch possessed an impressive range of innovative and path-breaking ideas that he went on to develop. He immediately established (with Rockefeller support) the Institute of Economic as a laboratory for econometric research. In USA he played an instrumental role in founding the Econometric Society and was seen by many younger and also by older members, such as Joseph Schumpeter, as the brightest star within the new Society.

A few years later a five years professional study program of economics and statistics was opened at the University of Oslo. Frisch was the dominating force in this program, there were no other teacher worth mentioning until Haavelmo was appointed in 1948. Among the earliest ones to join were a group of students, graduating in the early war years, which would play major roles in key positions in the post-war administration and planning apparatus. Among these were Bjerve and Aukrust.[17]

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[15] We deal very scantily with Hayek here, as his book did not play much role in the domestic Norwegian political debate over the national budgeting and planning to be described below. Hayek has been referred to as one of the inspirational forces behind the revival of liberalistic policies under Thatcher. Hayek's views were often invoked in post-war Norway by the harshest critic of Norwegian post-war policy, the editor Trygve J.B. Hoff, who in 1939 had defended a doctoral dissertation on the impossibility of economic calculation in a collectivist society, very much in the spirit of von Mises and Hayek, Hoff (1949).

[16] The subtitle of the book was (in translation): "The development during the war, the problems today, the policies of the future."

[17] For a more detailed story see Bjerkholt (2000).

Among the many projects of Frisch in the 1930 was his initiation of Norwegian national accounting, started in 1937, directed by Frisch and manned largely by student assistants, of which Petter Jakob Bjerve was the one who worked longest and most closely with Frisch. Perhaps none of this group of Frisch students can be said to have been really brilliant in an academic sense, none of them went on to an academic career. Frisch had, however, had one student of exceptional quality, Trygve Haavelmo (b. 1911), who had worked as Frisch's assistant and co-worker since 1933. Haavelmo went to USA for 1-2 years study in 1939, but because of the war, ended up working in Washington D.C. until the end of 1945 for the ministry of supply of the Norwegian government, which during the war was in exile in London. Haavelmo worked in 1946 at the Cowles Commission in Chicago and returned to Norway in the beginning of 1947. As we shall see, he turns up later in the story.

National accounting was an idea that at the time floated around in different countries, with USA, UK, the Netherlands, Sweden, Soviet Union and Norway having proponents with the most developed ideas. Frisch's interest can be directly related to his frustrated efforts at coming up with policy ideas that could mitigate the deep depression that set in 1930.[18] In one of the many meetings between Frisch and his young assistant Bjerve in the national accounting project, Frisch had come up with the idea that macroeconomic policy based upon a national accounting framework, could be conceived as '*national budgeting*', i.e. budgeting the national accounts for future years. The idea stuck with Bjerve who also carefully kept the note where Frisch had scribbled down the idea.

Frisch's national accounting were mostly related to the conceptual basis for the accounts, he left the empirical work by and large to his students. The national accounting project was not yet completed by the time the German occupational authorities closed the University and imprisoned Frisch in 1943. Bjerve was able to continue the work as the leader of a group young graduates and students within the Central Bureau of Statistics, under the protection of the head of the Bureau, Gunnar Jahn, who was a prominent member of the resistance. Officially, the group were working on preparing the basis for German claims on Britain, as ordered by the occupational authorities. By the end of the war national accounts according to the conceptual basis developed in Frisch's project had been compiled for the years since 1935.[19] It meant a flying start with regard to what was needed for post-war planning and policy-making.

In 1942 Odd Aukrust had given a talk to a small group of students on the economic transition problems after the war. The interest this generated encouraged him to a further study of the post-war problems, asking his class mate Bjerve to join him as author of a book, and other younger and some older economists to take part in discussion of the topic which gradually became more and more comprehensive. This resulted in the *Hva krigen kostet Norge* book. The young authors and most of the discussion group were much influenced by Keynes and by the Stockholm School economists, but above all they had been Frisch's students. Frisch himself had much less enthusiasm for Keynes.

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[18] Frisch mentioned the idea of a '*nasjonalregnskap*' ('national accounts') as a basis for stabilization policy in a pamphlet he wrote to explain the paradox of thrift, Frisch (1933).
[19] Statistisk sentralbyrå (1946).

The book they produced reflected their views. To some extent it can be read as blueprint for a post-war policy for Norway. The authors can hardly be regarded as proponents of socialist planning, their argument for comprehensive measures is of a more transitory nature than Franks' and also paying more attention to economic mechanisms. The book had drawn on information from contacts the authors were able to establish within the government administration. Aukrust himself could also benefit from information that he came across in his subordinate position in the rationing administration, and Bjerve even more from the information he dealt with in the Bureau of Statistics.

4. National budgeting as the superstructure of planning

At the liberation of Norway in May 1945 the five years with occupational regime was replaced by a temporary transition government whose main function was to re-establish democratic rule. Parliamentary elections to the *Storting* were held in October 1945. The Labour party won a clear majority and formed a new government headed by Einar Gerhardsen as Prime Minister. Gerhardsen chose Erik Brofoss as Minister of Finance. Brofoss (b. 1908) had before the war studied law and also economics in Norway, and only held rather subordinate administrative positions. He had fled during the war via Sweden to London where he joined the Norwegian government administration in exile and advanced quickly, in the Ministry of Finance and later in the Ministry of Supply. Brofoss has used his time in London well and had become familiar with Keynes' theories, British attempts at establishing national accounts, as well as Beveridge (1944), which was regarded by many as a blueprint for post-war policy in Britain. Hence, Gerhardsen chose a specialist, or even technocrat, completely unknown to the public rather than an experienced politician for the key position in economic policy, and he was prepared to support Brofoss fully.[20]

One of Brofoss' very first acts, in November 1945, was to send a telegram to Haavelmo, whom he did not know personally, and offer him a job, somewhat vaguely described as having to do "with national income, its composition and use in connection with the budget". The telegram even more cryptically gave instructions that he should familiarize himself with relevant theoretical and statistical calculations in USA and also in London when he passed through on his way home. Haavelmo knew what it was about, he was familiar with Frisch's national accounting efforts and had kept himself well informed about related work in USA. He also was most interested. The problem was that he had just committed himself to work for the Cowles Commission, already the world centre of econometrics, for at least one year from January 1946, so for the time being he was unavailable. Brofoss most likely must have got the information he needed about Haavelmo's credentials from Frisch and/or Arne Skaug who knew Haavelmo well from before and during the war.[21]

[20] This and the following paragraphs draw substantially upon Bjerkholt (2000).
[21] For more details, see Bjerkholt (2000). In 1939 Arne Skaug had gone to USA for Ph.D. studies at about the same time as Haavelmo. During the war Skaug gave up studies to become one of the Norwegian government's key representatives in international organizations. He spent much of the war in close contact with Haavelmo, they also shared a flat in New York for a year or so. Skaug became Director of the Central Bureau of Statistics in 1946 after when Gunnar Jahn left to become Director of the Central Bank. Skaug became Norwegian representative to OEEC and NATO and later Minister of Trade. (Haavelmo worked in

Thus Brofoss seemed from the telegram to want Haavelmo both to undertake national accounting and coordinate its use in economic policy. But Brofoss could not wait for Haavelmo to come home. He called for Petter Jakob Bjerve and gave him the offer of serving in the key post for planning and coordinating economic policy in post-war Norway. A few days later Brofoss established within the Ministry of Finance a new unit, called Monetary PolicyDivison. Bjerve was at work the next day as its Bureau Chief. A couple of months later Odd Aukrust was offered by Arne Skaug to become Bureau Chief of a new division in the Bureau of Statistics called the national income division. His task would be to compile national accounts and develop the national accounting system as he went along.

Bjerve may be considered as well prepared as anyone could be for the job he had been appointed to, the problem was that the job was far from well defined. Now he was the one to define it, in close contact with the Minister of Finance. Bjerve introduced Brofoss to Frisch's suggestive idea of a 'national budget'. It immediately became the name of the planning document to be prepared, and its preparation then became 'national budgeting'. In a remarkably short time Bjerve's tiny division came up with a paper, called *National accounts and national budget*, which was annexed to the Fiscal Budget 1945-46, presented to the Storting in the beginning of 1946.[22] In that document we can find the estimate, often quoted, of a reduction from 1939 to 1945 of total national wealth embodied in productive capital and household property, of 18.5 percent. The estimate originated in Aukrust and Bjerve (1945).

Before we comment upon the content of Bjerve's contribution, let us pose the question of where the idea of a 'national budget' had come from, not only the denotation? Establishment of national accounts was at this time something that was pursued in a handful of countries, including Norway and its Scandinavian neighbours. There were as yet no internationally approved rules for how to make it, hence slightly different conventions were followed in different countries. But 'national budget', what kind of entity was that?

We have already mentioned that Frisch had coined this word in Bjerve's presence some time in 1941. But the idea of a 'budget' for the nation in terms of national accounting concepts can hardly be called a Norwegian invention. Something similar has most likely have been thought of in all the countries that were in the forefront in national accounting. The term had even been used in American discussions of post-war policy, and it was indeed used by Beveridge in his 1944 book. What was special for Norway in this connection was the central position that 'national budgeting' came to occupy in the economic policy realm. The honour for that is at the highest level due to Brofoss and Gerhardsen, but also to Bjerve who may have contributed more than anyone else to give the concept the connotation and the generality that made it survive (until now) 59 years

1943-45 in Washington D.C. for a subsidiary of the Norwegian Ministry of Supply, in which Brofoss was a high ranking civil servant in London.)

[22] Finans- og tolldepartementet (1946).

as the key economic policy document in Norwegian government administration (but naturally with a very different policy content today than in 1946).[23]

Bjerve's 1946 'national budget' was not really a national budget. It was more an introductory discussion of the idea and a preliminary demonstration of what it could be used for. For one thing Bjerve did not have the required national accounts data to construct a budget. He had updated as best he could his wartime work in the Bureau of Statistics to make national accounts for 1944. Using that as a basis the Monetary policy division had prepared a "national budget" for 1946 in three alternatives. The analysis drew much on the work done in *Hva krigen kostet Norge*, and the budgets were more like 'gap analyses' of the economic situation, which gave numerical estimates for the magnitude of the reconstruction problem. But Bjerve went beyond the purely current situation picture and included in the publication also a "national budget" for the period 1946-50.[24]

The rest of the year Bjerve and his staff, which had been a little expanded, devoted to the preparation of the national budget for 1947, a massive publication presented as a white paper in the beginning of 1947. It had a very different character from the 1946 introductory version and a major aim had been to coordinate with all ministries and directorates and incorporate all plans for the use of economic resources, as well as all quantitative regulations in a document of distinct programmatic character. The publication also comprised a discussion of principles and methods of national budgeting, within which it was strongly emphasized that the national budget framework was to be used to formulate a <u>programme</u>. A less ambitious use of the national budgeting concept would be to prepare a <u>prognosis</u>, aiming at forecasting the development without any programme of what prices and quantities ought to be. An even less ambitious use would be as a <u>diagnosis</u>, merely analysing the economic situation.

Norway was not the only Western European situation to consider national planning as an approach in the post-war reconstruction situation, although one of first to initiate anything deserving of that denotation. One important difference between Norway and other countries in this regard is that the central command of the planning was located in the Ministry of Finance, which in most countries confined itself primarily to fiscal matters. Norway had a much stronger concentration of responsibility for economic policy in one Ministry. Quite common was to establish a Ministry of Economic Affairs, or something similar, in addition to the Ministry of Finance. The preparation of plans was in some countries left to government agencies outside Ministries, and prepared without being the responsibility of the constitutional authorities.

Bjerve's work set a long-lasting precedent, although the National Budget 1947 was the only national budget he was responsible for preparing and coordinating. Bjerve had arranged for two years study leave in USA as Rockefeller fellow and certainly would not give up that chance. His successor as Bureau Chief became – Haavelmo! Unlike most

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[23] In the earliest post-war political documents prepared by the Labour party, the term 'people's household budget' was used, sounding today perhaps like something rooted in Stalin's Soviet. It was soon replaced by the more appealing and also more precise 'national budget'.

[24] At the same time Jan Tinbergen, who shared the first Nobel Prize in economics with Ragnar Frisch, did similar work as Bjerve in the Netherlands, but in a more visible and prominent position as Director of the newly established Centraal Planbureau.

European economists who happened to spend the war years in USA Haavelmo never seemed to have been in any doubt as to whether he would return to his home country after liberation, it was only question of the right time and opportunity. Frisch had succeeded via persuasive influence upon Brofoss to get into the budget proposal a new chair as professor in econometrics at the department, meant for Haavelmo, fearing perhaps that he might choose to remain in USA.

Haavelmo came home at the beginning of 1947 and probably expected to do some teaching at the university while he waited for his appointment to come through. He surely had no idea how long time it would take, and may even have been misled about it. In the meantime he got an offer he could not reject, namely to take over Bjerve's position, the same one he had expressed interest in at the end of 1945.[25] Haavelmo had by that time been away from Norway almost nine years.[26] But he seemed to have had no difficulty taking over this key position within the government. He worked in close contact with Aukrust who prepared the national accounts figures he needed.

A few months after he had embarked upon this temporary job Lawrence R. Klein arrived in Norway on a prearranged visit to spend one year at Frisch's Institute. Klein had worked with Haavelmo at Cowles Commission and already as a student at M.I.T. he had invited Haavelmo to give a seminar on his econometric results before they had been published. Klein was at the forefront in econometrics, he had published a book on the Keynesian revolution which became on of the most popular introductions on this topic, and he had constructed the first macroeconomic model in USA and demonstrated that the model, indeed, did better in forecasting than the experts in Washington. Haavelmo had informed Frisch about Klein and his work and Frisch strongly encouraged Haavelmo to invite for Klein to come to Oslo.

Klein thus came to Oslo as a visiting scholar at Frisch's Institute and kept in close contact with Haavelmo. He became an observer of the national budgeting process at close range and surely also exerted an influence as an informal adviser. Haavelmo surely must have discussed almost every aspect of the budget with Klein. Klein wrote during his stay an article about national budgeting in Norway, published soon after he returned to USA.[27] It was an eyewitness report written with enthusiasm, but certainly not without criticism. Klein gave a succinct picture of the setting in which the national budgeting took place, the pertinent features of the budget and elaborated on the differences between Bjerve's voluminous national budget publication and the much slimmer and more focused national budget 1948 that Haavelmo was responsible for. For a brief overview of the national budgeting in the early years we shall rely on Klein's eyewitness report.

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[25] While Haavelmo served, Brofoss left the Ministry of Finance to become Minister of Trade. He took the responsibility for the National Budget with him as well as the staff, and established in his new ministry an "Office of the National Budget". The responsibility for the National Budget went back to the Ministry of Finance in 1952, when the deputy leader of the Labour Party and Gerhardsen's successor as Prime Minister, Trygve Bratteli, became Minister of Finance. Brofoss continued two years more as Minister of Trade and the became the Director of the Central Bank.

[26] Haavelmo had been in teacher at Aarhus University in 1938/39 and spent only a short period in Norway before he went to USA in June 1939. After that he had only been home in the autumn of 1946 to defend his doctoral dissertation *The Probability Approach in Econometrics* with Frisch as opponent.

[27] Klein (1948).

Klein stated by way of introduction that the efforts to cope with reconstruction differed among European countries in terms of methodological approach from relying on free markets to do the job at one end to complete planning at the other. He endorsed the programmatic approach Bjerve had outlined and characterized in comparison the reports of the President's Council of Economic Advisers and the reports of the President to the Congress as "largely diagnoses and prognoses, they are not programs."[28] Klein characterized the effort in Norway as an "experiment in economic planning", being very modern in character and a result of the influence of Norwegian economists in the drafting of the program. The Norwegian economy had by comparison with other European countries not a particularly high government-owned share of industry. The changes the Labour Party government had introduced was not an increase in the government share of industry, but a change of the economy from one of "relatively free enterprise to one of controlled and planned private enterprise." Klein noted that the Norwegian people were psychologically prepared for the new development as a result of their familiarity with regulations pertaining to the marketing of agricultural and fishing products and with social services.[29]

Klein was certainly very positively inclined towards planning, especially in the situation that Norway was in. After characterizing the Norwegian economy as an economy of shortages, Klein argued that, "in this situation a very wise use of scarce resources was called for, much wiser than the uses that would be dictated by the free-market mechanism." Thus Klein endorsed the government's policy of retaining many of the wartime controls, while doing away with others and developing new controls facilitating the rebuilding of the economy. "The shortages of consumer goods called for rationing and price controls; the shortages of industrial goods for rationing , priorities and licensing; the shortages of labour for wage-price formulas; the shortages of foreign exchange for import-export licensing and exchange controls." Then the role of the national budgeting would be to coordinate all the different policies and controls into a comprehensive plan.[30]

Klein proceeded to summarize the main structure of the national budgeting process. The starting point was to set targets for the different branches of economic activity on the basis of the population's preferences for different types of goods. Klein's interpretation of this targeting process was that "the public authorities try to construct alternative social valuations by considering whether to import consumer goods now or to restrict consumption and first build up the productive capital; whether to construct dwellings to meet the housing shortage or to extend the facilities for public services, whether to invest in ships or in new industries that produce goods at home; an so forth." Then the problem was to use the direct and indirect controls to achieve the stated targets. Most important were the direct controls on quantities produced and distributed either at home or abroad. Of the import and export licensing were the most important. From the use of quantitative controls followed the need to ration consumers with respect to food, clothing and housing space, and producers with respect to strategic materials such as lumber, iron, steel, cement and bricks. In addition to quantitative controls indirect controls, such as prices,

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[28] Klein (1948), p.799.
[29] Klein (1948), pp.795-796.
[30] Klein (1948), p.798.

wages, interest rates and taxes, as well as other fiscal policy measures were used to pursue the targets, as were also various other kinds of control.[31]

The use of manpower naturally was a key area for planned allocation as labour power was in short supply as soon as reconstruction got under way. It was handled with gloves on. “Since the strength of the planning government lies in its trade-union support, it is unlikely that direct controls will be tolerated in the labor markets as along as workers retain their present suspicious attitude.” Instead of more coercive measures propaganda and employment offices were used to guide unemployed workers to job opportunities and wage policy was “used as a substitute for direct controls”. But some direct controls were used in the labour market such as permits for all construction projects requiring more than a certain small number of workers.[32]

Klein remarked in passing that the logic of this target-instrument process “could easily be fitted into the modern theory of welfare economics which envisages a maximum of social welfare subject to the constraints of the society such as the technology, the free supply of labor services, and possibly others.”[33]

The national budget for 1947, which Klein studied in much detail, comprised eight budgets in addition to the general national budget. These were: 1) the manpower budget, 2) the materials budget, 3) the budget for exchange of goods an services with foreign countries, 4) the foreign exchange budget, the production budget, the consumption budget, and 7) the investment budget. All cabinet ministries and various other government agencies took part in the planning and national budgeting process. It was coordinated by the Committee of the National Budget, which consisted of technical experts and was chaired by the bureau chief of the Office of the National Budget. At the political level the national budgeting process was subordinated to a cabinet committee on economic matters comprising the Prime Minister, and five Ministers.[34]

The National Budget for 1948 was presented to the Storting early in 1948. Haavelmo ended his brief guest role as a planner soon after that and moved over to the university in the middle of the spring term and began to give lectures on modern macro theory. Klein who had followed the preparation of the 1948 National Budget at close range commented upon the differences Bjerve’s and Haavelmo’s budget document. Haavelmo found no need to repeat the general principles of planning and budgeting, neither to discuss end and means at the same length as his predecessor. He also relegated the technical appendices to other publications and thus produced a much slimmer document. In Klein’s words: “…the National Budget for 1948 is more elegant and manages to say as much as in 1947 with fewer pages; this represents administrative progress in planning.” Klein also admonished Haavelmo for other simplifications, namely cutting down on the number of different budgets. As production and employment by sector are related through input-output coefficients the production and employment budgets could be combined. Likewise, the public sector budget could be derived logically from the other budgets, hence, it could

[31] Klein (1948), pp.799 & 801.
[32] Klein (1948), p.801.
[33] Klein (1948), p.800.
[34] The Minister of Finance, the Minister of Trade, the Minister of Supply, the Minister of Industry and Shipping and the Minister of Social Affairs.

be omitted.[35] Haavelmo also added new elements, such as a discussion of national income, as distinct from gross domestic product, and its distribution. The final section of the 1948 National Budget dealt with an '*aktiviseringsplan*' ('activisation plan') in which, according to Klein, the planning problem was properly stated in terms of welfare economics.

Klein was in Norway during the liquidity crises in the foreign exchange reserve accounts in 1947, caused by the issuance of import licenses beyond control, and with an unforeseen, big import surplus as consequence. The housing program for 1947 failed as far too few new dwellings were built. Klein gave interesting comments in an attempt to understand how and why the strict import license system could run out of control. He also observed the measures taken in the 1948 budget to avoid similar failures.

In his appraisal of Norwegian economic planning Klein was not without criticism. He pointed out that the one-year horizon of the national budget was too short for planning purposes and that other countries had come further in preparing multi-year plans. He referred to the five-year framework plan prepared in the Netherlands. This point was hardly controversial, Bjerve had indeed made that point in his preliminary 1946 document, and both Klein and the Norwegian planners were aware at the time that the Marshall Plan would call for a four-year programme as a requirement for participation.

A more substantial criticism was that the formal planning framework comprised only the definitional relations that followed from national accounting. Missing were production functions, consumer demand relations for unrationed goods, supply of labour, etc. This implied that planners could fall into the illusion of having many more degrees of freedom that there actually were. Klein suggested that continued work would result in "a more satisfactory theoretical basis for Norwegian planning and to contribute to a solution of the problem of the number of degrees of freedom." Without using the word, Klein pointed to the need for models as a tool for planning.

Klein's criticism also dealt with the policy content of the plan. He criticized the strong reliance on indirect controls, particularly taxes, on the assumption that they are less of a burden than direct controls. Klein found that taxes had become quite "oppressive" and that "the government is only fooling itself and not the people if it thinks that indirect controls are not felt." This was hitting very exactly, as Brofoss was known for his statement to the effect that people would adjust to and accept any level of taxes. Thus Klein seemed to have preferred more quantity-regulating indirect controls to reduce the burden of taxes. He also hit at the lack of following up on the policies promoted in the plan, mentioning two examples, recruiting women into the labour force and increasing tourist income. Both were important to overcome shortages, of labour power and foreign exchange, respectively.

Klein also criticized the government for not doing much effort in terms of making a better public relations job out of the national budget. It remained in government offices and on paper, "no popular readable version of the National Budget has ever been presented to the population"! He ended his appraisal by stating that the most refreshing aspect of Norwegian economic planning has been "the attitude of the guiding economic

[35] Klein (1948), p.809.

theoreticians to disregard all preconceived notions about the supposedly optimal properties of a free-market economy and to look for direct and indirect controls that will lead to an even higher level of economic welfare."

What were the theoretical convictions of the planners, such as Brofoss, Bjerve, Aukrust and Haavelmo? They were hardly ideologically motivated supporters of complete planning, but rather to be considered as Keynesians in their conceptions of macroeconomic mechanisms. Because of the reconstruction problems and the restrictions on trade and currency exchange, planning was necessary, but when the planning controls gradually could be lifted, the planning of the economy would shift towards macroeconomic management by means of the Keynesian policies, in line with Keynes' views as quoted above. Klein was also a Keynesian *par excellence*, as author of the most widely read version of Keynesianism in USA, but at the same time he may have seemed to be even more convinced of the merits of planning, than the key Norwegian planners.

But international events developed in ways, which influenced the course the national budgeting took. Just in the interval between the 1947 and 1948 national budget the most important event for the reconstruction in Norway and the rest of Western Europe started to unfold: the Marshall Plan. USA had during and in the immediate aftermath of the war given substantial credits and loans to European countries, particularly to United Kingdom, but the plan launched win the last part of Truman's presidency had different dimensions.

The Marshall Plan was initiated by the US Secretary of Foreign Affairs, George Marshall, in a speech in June 1947. The invitation to take part in the cooperation and benefit from the American offer did also include Eastern Europe and the Soviet Union, but the east bloc which was under formation, declined the invitation at an early stage. Whether the offer to the Soviet controlled part of Europe was a genuine one, is a moot issue. It is in any case that fact that the east-west conflict became an integral part of the Western Europe economic and political cooperation that was initiated by the Marshall Plan. The Cold War was on, Europe was divided.

The Marshall Plan organization developed quickly. The first meeting between USA and the invited and interested countries of Europe was held in Paris already in July, merely a month after Marshall's speech. The British delegation was led by Oliver Franks. The Norwegian delegation was led by the Director of the Central Bureau of Statistics, Arne Skaug, and included by Petter Jakob Bjerve. OEEC was soon established as the organization of Marshall Plan.[36] The European Payments Union (EPU) which comprised a clearing exchange opened for trade in non-convertible currencies, which eventually resulted in free trade within OEEC from 1951. This opened for a rapid increase in trade of about 8 percent p.a. Complete convertibility and free multilateral trade were targets for the future, and were achieved in 1958.

The recovery of Europe was thus built on a series of stepping stones. The Marshall Plan smoothed the way by its generous financial support, which to a large extent resulted in imports from USA. But the non-financial effect of the Marshall Plan, namely, that it forced the European countries to cooperate, should not be overlooked, as it must be considered to have been of rather great importance. The strings attached was not only to

[36] OEEC became OECD in 1961.

take part in the institutions, policies and cooperation measures agreed within the OEEC, but also to provide proof that the aid provided under the Marshall Plan would contribute to growth and increased economic capacity, i.e. the preparation of comprehensive plans to that effect.

The Marshall Plan lasted officially until 1952. An estimate of the total support under the Plan is 13,000 mill. dollar. The support given under the Plan was primarily foreign currency support, allowing the European countries to import more than they otherwise could. The imports were to begin with to a large extent food, fertilizer and fodder, but later more raw materials and capital equipment.

West Germany was dealt with more leniently than happened to Germany after WWI. The leniency was probably enhanced by the Cold War. The division of Germany and the East-West conflict resulted in the western powers seeing their interests best served by rapid reconstruction of the German economy and production capacity, rather than by extending the misery of the devastated population by claims for war reparations. The West German economy soon became integrated into the economic cooperation, the *Wirtschaftswunder* became a reality.[37]

Haavelmo got his appointment as professor soon after he had completed his national budget and started to lecture on macroeconomic theory. He was succeeded in his key position for national budgeting by Eivind Erichsen, who also was one of the war graduates in economics and had belonged to Aukrust and Bjerve's study circle. Erichsen later became the first head of an economy department in the Ministry of Finance.

We have until now bypassed one important issue in the transition period, namely that of inflation. The post-war government made a strategic choice soon after the war ended to stick to called price stabilization ('stabiliseringslinjen'), which meant that the price level should be maintained at the 1945 level as measured by a cost-of-living index. This was not obviously a wise choice and caused considerably controversy. One problem was that there was a general demand surplus and high liquidity. Aukrust and Bjerve had also argued in favour of price stabilization, but also recommended a drastic reduction in liquidity through a change in valid means of payment. Such an operation was undertaken in September 1945 shortly, before the book came out, but it resulted only in a very more moderate reduction in liquidity. As a consequence comprehensive price control was put into effect and the stabilization line required increasing price subsidies.

The main argument in favour of price stabilization was that stability would help the reconstruction, the employment and efforts to compete in the export market. Not less important were distributional concerns. Underlying this choice of inflation policy was the assumption, that Myrdal had promoted, namely that after a short boom with inflationary pressure would follow a deflationary price development. This did not happen, neither did increased production reduce the demand surplus as much as expected. The prize stabilization took away the freedom to maneuver in exchange rate policy and also to an increasing degree in fiscal policy.

[37] The Federal Republic of Germany was founded in 1949, followed soon after by the German Democratic Republic.

Brofoss raised the issue of giving up the strict price stabilization relatively early, but did not pursue it in the cabinet. In 1948 Aukrust and Haavelmo were asked to assess the price stabilization policy and pointed out, in a memo that never was properly published, the negative effect upon resource allocation and incentives. It also suggested a way out. Bjerve was in USA but was kept informed, he was somewhat more reticent than the other two, although they were not far apart. Both Aukrust and Bjerve had to admit they the inflationary problems were more difficult that they had imagined during the war. When Norway devalued the currency relative to dollar in 1949, the price stabilization was given up and other changes in economic policy also marked that the war-to-peace transition years were over.

On the stabilization issue the Norwegian economists did not find much similar support in Klein, whom some of them even found almost naïve in his support of price stabilizations.[38] Klein praised the stability of the Norwegian economy since liberation "in the midst of inflations and deflations in other economies of the world that have tried the unplanned, free-market solutions", which rested primarily upon "strong price controls and subsidies" along with a "wage-price formula". But Klein certainly had a point when he pointed out that reconstruction had proceeded without the occurrence of a single major strike thus far, despite Norwegian workers prewar record of great militancy. Klein doubted that there existed "a parallel example in the unplanned economies where labor's real income was not protected." Klein may have overlooked or placed less emphasis on the fiscal costs of supporting price stabilization, which indeed was a major reason for the high personal taxes.[39]

5. From the constrained 1950s to the golden 1960s: the introduction of models

The Marshall Plan meant a quite significant relaxation of Norway's hard currency constraint. The problems of expanding under the existing constraints had also been underestimated in the first post-war years. United Kingdom devalued the pound relative to dollar in 1949 and Norway's dependence upon trade with United Kingdom resulted in a corresponding devaluation of the Norwegian *krone,* although this was a somewhat controversial decision among the economists in the inner circles. The national budgeting system surely helped to prepared the four-year plan required by the Marshall Plan and it may also have helped in making good use of the Marshall support.

The national budgeting continued very much along the path drawn up in the first two national budgets. The economic policy regime changed gradually, much of the consumer rationing was abolished in the early 1950s and also the detailed commodity rationing of building materials etc. The planning controls shifted to more emphasis on indirect controls. The rationing of cars to be paid for in hard currency cars lasted however almost until 1960. Investments were increasingly controlled via credit supply.

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[38] The inner circle gossiped about whom had exerted influence on Klein in these matters.

[39] Quotes from Klein (1948), pp.810-811. Klein's observation that wages and prices had been stabilized at such levels that income was much more evenly distributed than was the case before the war, is interesting when the postwar reconstruction is considered, reasonably, as a kind of transition process, as all experiences from transition countries in the 1990s point in the direction of increased disparity of income as an (almost?) necessary consequence.

One of Klein's lucid observations (cf. above) was that constraints reflecting economic relationships should be more explicitly incorporated in the planning procedures, not only those given by the definitional equations of the national accounting. Otherwise the planners and policymakers could be deluded about the number of degrees of freedom. This was clearly tantamount to suggesting formal models to be used. Klein was one of the world's very few macroeconomic modelers at that time, but his model of the US economy was a very aggregate one and not the kind of model that would fit into the national budgeting very well.

Klein's early macroeconomic modeling work had been mediated to Frisch by Haavelmo, even before Haavelmo returned to Norway. The idea caught on with Frisch and was very much in line with other approaches he had pursued. He coined a new catchword around 1947: *decision models*. The connotation was a macroeconomic model useful for making decisions, that is, it had to have variables representing policy instruments, naturally also variables representing the targets to be pursued. He constructed, as part of an engagement he had for the United Nations Employment Commission, a model to demonstrate the logic and potential for using models in government planning. It was an aggregate model focused on the use of fiscal variables in constrained economic situations, but yet quite large due to detailed specifications.[40]

From 1949 Frisch started to take an increasingly deep interest in input-output models, as developed by Wassily Leontief, who turned his input-output approach ha had been working on at Harvard since the mid-1930s, into an operational model during the war and it was taken into use for war planning purposes, supported by US Air Force. Frisch, who knew Leontief since the early 1930s, was probably made aware of his more recent work by Bjerve, who had befriended Leontief at Harvard in 1947-48, thoroughly studied his work, and immediately recognized its relevance for the national budgeting he had helped to initiate in Norway. Of interest to Frisch was not least that linear programming with the simplex method developed by George Dantzig, appeared at about the same time and offered an optimalization procedure for problems with linear constraints. Frisch started in the early 1950s to construct input-output based models at the Institute.[41]

The format of the Norwegian national budgeting which was based on quite detailed treatment of commodities and sectors, fitted as hand-in-glove to input-output analysis. The Norwegian national accounting system designed by Aukrust was primarily meant to provide the necessary support for the national budgeting. Using detailed production statistics the Norwegian national accounts were unlike the national accounting efforts undertaken in most other countries, comprised input-output tables as an integral part. Effective use of input-output analysis required inversion of matrices larger than in practice could be done by hand. Computers were virtually non-existent.

Bjerve who had come back from USA in 1949 and become Director of the Central Bureau of Statistics, sent research staff to study with Leontief and also invited some of

[40] See Frisch (1949).

[41] The lack of computer power was severe constraint on his work, in particular for optimalization problems. Frisch was extremely good at designing manual large-scale calculation schemes, he also used the first rather small experimental home-made computers available in Norway and he sent data to Sweden for calculations at the Åtvidaberg which made calculators and was leading the field in the race towards computers in Sweden.

Leontief's co-workers to Norway to explore the possibilities for building and using input-output model. One idea pursued was to send input-output matrices to USA to be inverted and sent back. In practice this was too cumbersome to be implemented.

In the meantime the consistency of the national budgeting procedure was attempted solved through the so-called 'administrative method', which meant iterations within the administrative network, which generated the national budget. This could at best give only a rough approximation. Use was also made of input-output matrices inverted by hand, of smaller dimension than the industrial detail used in the national budget. Thus the effort to acquire the necessary computer power and construct input-output model continued.

The first model established by the Central Bureau of Statistics for the national budgeting was the MODIS model, an input-output model with 120 industries and incorporated consumption demand relations. It was completed in 1959 and used for the first time in the preparation of the 1960 National Budget. It had strong similarities with a model Frisch had experimented with at the Institute in the mid-1950s.[42] It was solved on one of the first commercially available first-generation computers acquired by the Central Bureau of Statistics in 1958.[43]

To build and solve this model with the equipment available was as striking achievement. The fitting of it into the national budgeting process may be considered as a gradual process, with the administrative method and the model co-existing for some period, before the model took over completely. One big advantage of the model was the possibility of calculating alternative solutions, which considerably enhanced the policy analysis.

The introduction of formal models thus happened just shortly before the 1960s. From around 1960 Western Europe had overcome most of the constraints created by the war. Trade expanded as trade constraints were removed throughout the decade. OEEC was transformed into OECD, whose number one aim according to the statutes printed in every OECD publication was 'maximum growth'.[44] In the 1960s macroeconomic models were built for several European countries, but none of these were built to serve as an administrative tool like the MODIS model, which in its design became an outlier in comparison with models of other countries, but also a model probably used more intensively for policy-making than any other.[45] Models for other countries fell largely in

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[42] See Frisch (1956).

[43] The computer was DEUCE, the prototype was developed by English Electric in 1956. Needless to say it was primitive by today's standard. The random access memory was smaller than that of a mobile phone and much slower. The computer filled a large room with radio tubes. It was the first proper computer in Norway. The Bureau of Statistics also bough the first IBM computer in Norway in 1960 and most likely was the only statistical bureau to play such a pioneering role in its country's computer development.

[44] The emphasis on maximum growth may well be an outcome of the challenge posed in those years by Premier Khrushchev of outgrowing the Western powers and the reason why. OECD set overambitious growth targets for the 1960s.

[45] "A completely different tradition in model building exists in Norway. Stemming from the model building work of Frisch and Johansen, the Central Statistical Bureau has, under the direction of Aukrust, built a series of "Modis" and "Prim" models, to predict industrial output, prices, and income distribution by means of input-output analyses. These models, in which the major final demand aggregates are predicted exogenously, and in which coefficients are not estimated econometrically, are completely different from the other models surveyed; no comparable work exists elsewhere: in other countries input-output has found

the class Frisch called “on-looker approach”, in distinction from his decision model concept.[46]

The first MODIS model lasted only until more powerful computers became available. It was replaced by MODIS II in 1965, which also comprised the input-output price model and thus allowed the calculations of nominal incomes.[47] MODIS II was a vast improvement over the first MODIS model and allowed a much wider range of policies to be calculated. The model became a much stronger integrating element in the whole national budgeting process. Further model improvements followed in 1965 with MODIS III and in 1974 with MODIS IV. The latter model comprised around 5000 variables and incorporated a much higher level of detailed representation of fiscal and other variables. The use of the model became very intensified with hundreds of alternatives calculated for each national budget prepared, while the original idea was more like making one calculation for each national budget.

The economic content of MODIS II-IV was limited. In addition to the national accounting definitional relations it comprised production relations in terms of input-output coefficients, consumption relations (macro consumption function and consumption distribution relations) and price relations incorporating the Scandinavian model of inflation.[48] In a sense this reflected the increasing role of incomes policy as part of the overall economic policy. Investment relations, labor supply, export-import relations etc. thus were not formally included in the MODIS, but still dealt with outside the model.

The model thus emphasized accounting relationships, information handling, sectoral and fiscal detail within an administrative system, but left important behavioural relationships to be taken care of outside the macroeconomic model itself. The underlying idea was that these relationships would be taken care of outside the model through the detailed specification of the exogenous variables fed into the model, sometimes there were auxiliary models used in this specification. But this implied a lack of simultaneity, which was hard to assess. It could be compensated for by iterative calculations. For this purpose much emphasis was put on achieving a user-oriented model, easing the two-way communication between the policy makers and the model. The shortcomings of the model with regard to having simultaneous relationships thus would be counteracted by the expertise in the model environment. In a sense, it was the ‘administrative model’ on a higher level.

Another shortcoming, at least from Frisch’s point of view, was that there were no formal procedure for evaluating the alternative results generated by the model. It seemed clear

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applications in long-term rather than in short-term planning.” Quoted from J. Waelbrock: “A survey of short-run research outside the United States”, in Fromm, G. and L.R. Klein (eds.): *The Brookings Model: perspective and Recent developments*, North-Holland, Amsterdam, 1975. p.425.

46 See Frisch (1962).

47 UNIVAC 1107 had been acquired by the Norwegian Computing Centre a couple of years earlier. It was one of the world’s most powerful computers at the time. To solve MODIS II on this computer had a cost roughly similar to the annual salary of a researcher. Thus mistakes were costly too!

48 Aukrust pioneered the Scandinavian model of inflation in 1965 as chairman of an expert committee appointed to give advice on inflation problems, which resulted in the PRIM model, the first version of the Scandinavian model of inflation, which was immediately incorporated in MODIS. .

that the Ministry of Finance view was that an incomplete model and a procedure of groping for acceptable outcomes was much to be preferred to the optimalization approach that Frisch professed.

The relation between the three key institutions in this picture, the Ministry of Finance, the Central Bureau of Statistics, and the Institute of Economics, was that the Ministry and the Bureau worked intimately together, but with a clear division of labour. The Ministry was responsible for all assumptions to be fed into the model and all contact with the national budgeting network within the government administration. The Bureau undertook the calculations as a technical task and decided all further improvement and development of the model. The Institute kept at a distance from the daily work, but took part in frequent meetings between the three institutions on model issues ('the model committee').[49]

Frisch had his own ambitious research program and designed and constructed a series of models at the Institute. He got more chance to put his ideas into practice in the United Arab Republic than in Norway. Frisch pursued a number of ideas much more advanced than what was put into operation in Norway, in a particularly in his emphasis on optimalization of a political preference function.[50] Occasionally, Frisch would let out that he was dissatisfied with the ambitions in Norwegian economic planning, and also with the reduction in the number of control instruments, which followed from the gradual dismantling of the post-war economic regime.

An issue we have passed over was the need for plans and projections for a longer period than the one-year horizon of the national budget. Klein made a point of this, but soon after the Marshall Plan requirement resulted in a four-year plan, which could be considered as a national budget for a four-year horizon. It was also prepared similarly as the national budget. After the Marshall Plan four-year the government decided to have four-year programs prepared every four years. It was fitted into the electoral cycle, which comprised parliamentary elections in September every four year with the "Long-Term Programme" (LTP), as it was called, presented in the spring of the election year. These programmes covered the periods 1954-57, 1958-61, etc. After the MODIS model had arrived, it naturally was used also to prepare the LTPs. The content of the LTPs also changed over time from reflecting the constrained post-war situation to becoming the most important policy document for the expanding welfare state.

The question was raised whether the four-year horizon required another model than for the national budget. The shortcomings, discussed above, were more serious when the horizon was longer. Leif Johansen, Frisch's foremost post-war student, who had worked as assistant for Frisch since he was an undergraduate in the early 1950s, embarked on a doctoral dissertation projected which comprised the construction of a multi-sectoral general equilibrium model.[51] The dissertation was published in 1960 and was the first of

[49] Bjerve's career shows in a sense the close ties between the three institutions and between them and the political level. After having been Frisch's assistant as a young candidate, he became Bureau Chief under Brofoss and after returning for USA, head of the Central Bureau of Statistics. In 1961-63 he became Minister of Finance. Perhaps his strongest legacy was the contribution he made to national budgeting in 1945-47.

[50] See e.g. Frisch (1962, 1963).

[51] Leif Johansen (1940-1982) was a very gifted economist who took over Frisch's chair in 1965. During the 1960s Ragnar Frisch, Trygve Haavelmo and Leif Johansen reigned supreme at the Institute of Economics.

its kind of models that much later were nicknamed AGEs (applied general equilibrium models).[52]

The Ministry of Finance initiated after deliberations in the model committee that the Institute adapted the Johansen model, now named the MSG model, for Ministry use in connection with LTP planning. It was for the first time used in preparing the 1970-73 LTP. The original Johansen model had 20-plus industries, a big jump down from the extreme details of the MODIS model. After that exercise, MSG was taken over, run, updated and developed further by the Central Bureau of Statistics. The LTP from 1969 included in addition to the four-year programme also projections for a longer period.[53]

The 1960s were a prosperous time for the Norwegian economy with low unemployment, moderate inflation and higher growth rate that in the previous decade, as indeed was the case also for most other European countries. But problems were looming under the surface. The benefits of trade and international division of labour required more flexibility of the labour market and in the wage setting, it became less predictable than before. The 1960s also was the beginning of a marked increase in female employment.

The high and stable growth also may have contributed to the creation of dogmas, based on the adopted Keynesian interpretation. One example can be illustrated by a quote from Johan Vogt, professor of the Institute of Economics on the interest question. Vogt was a somewhat off-beat professor, and others may not fully have agreed with the view he professed in a popularized presentation of economic issues of the day in the late 1940s:

> "Interest rate policy is now in a different situation, because we have learnt the technical methods whereby one can have low interest and permanently maintain low interest. We can on this basis assert the following fundamental conclusion: <u>The general rate of interest will in the future in Norway never again increase.</u>"[54]

But much later than this, say, in the mid-1960s, it is probably fair to say that it was a widespread consensus among Norwegian economists that the unemployment problem had been solved once and for all, thank to Keynes. By following the Keynesian recipe belief the menace of unemployment would not be allowed to reappear.

As all three had socialist convictions (although adhering to three different parties) and also were strong proponents of considerable elements of planning of the economy, it was a different environment than most other departments of economics in Western Europe. Nothing remains today of this tradition, Frisch, Haavelmo and Johansen have not been on the reading lists for decades. The University has preserved the memory of Haavelmo by naming a coffee bar after him. Frisch is honoured(?) by naming an old B movie theater, now used as auditorium, after him. Even the name of the Institute was changed to become the 'Department of Economics' to fit into the modern mold.

[52] Johansen (1960,1974), Bjerkholt (1998), pp.331-332.

[53] The 1969 projections were for twenty years ahead, later the horizon was extended to reach fifty years, which may seem unrealistic long, but made more sense in the Norwegian context than for other countries because of the build-up of oil revenues to be used over long horizons to support retirement claims in an aging population. The MSG now exists as MSG-6, a huge multi-year, multi-sectoral and multi-purpose general equilibrium model.

[54] Then he added: "Economics have often given false prophecies, and in general one should no rely more on economists as prophets than on other mortals. Here, however, it is not a question of prophecies or guesswork, but only about seeing the realities as they are." Translated by the author from Vogt, Johan: *Pengerikelighet og rentepolitikk. De moderne synspunkter kontra de ortodokse*, Aschehoug, 1947, pp.53-54.

6. Adapting to more volatile economic conditions in the 1970s

Looking back at the first post-war decades from the vantage point of 1973 it had historically been an era of exceptionally high growth for the entire area of the original OEEC countries. The GDP growth per capita of the OEEC countries together with USA, Canada and Japan was 4.5 percent from 1950 until 1973. Highest growth had Japan with 7.3 percent and lowest was that of Great Britain with 2.2 percent.[55] The growth pattern fitted well into the convergence predicted by standard neoclassical growth theory, highest growth in countries with low capital intensity.

An important role was played by the supply of labour, which varied considerably between countries. The main source for increasing the labour supply for the manufacturing sector was through releasing labour tied up in agriculture. The total increase in employment in Norway through the 1950s was not more than about 30,000 man-years, in this situation the reshuffling through releasing underemployed labour from agriculture was very important. In the 1960s the high fertility of the 1940s created a strong inflow in the labour market. For the German miracle the inflow of labour power from GDR played a great role.

Whether Norway’s growth record in the 1950s was satisfactory, is debatable. It has been pointed out by students of the economic development that the increase in production was by international comparison small relative to the increase in investment. Whether that can be converted into a statement of unsuccessful planning, say, in the allocation of investments, is less obvious.[56]

What then were the decisive factors behind the impressive growth record for Europe in the 1950-73 period, as set out in table 1? Recapitulating what has been discussed above, we mention some major elements with no attempt at assessing the relative importance: (1) the US assistance through the Marshall Plan, (2) the economic policy in each country with somewhat varying emphasis on central planning and decision-making, vast expansion of the public sector, and emphasis on government responsibility for providing stability, gave impetus for industrial expansion, (3) extensive international cooperation at government level (partly a indirect result of the OEEC cooperation), (4) relative strong consensus in politics and in the labour market (perhaps also to some extent an outcome of the war), (5) a good supply of human capital, partly underutilized in the 1930s and new human capital from post-war educational investment. Finally, (6) a good share of the expansion may be viewed as catch-up gain, both with regard to the loss of expansion in the interwar period, the war destruction and also technological catch-up of the vast lead that USA had built up as a large extent as a result of the war effort.

But in the 1970s the challenges came one by one, and the first was the breakdown in the dollar based fixed exchange rate regime which had lasted since the early post-war period. USA’s reserves were depleted and from August 1971 it was no longer fixed exchange rate regime. One pillar in the stability framework of the post-war expansion had broken down. Later followed price hikes in raw materials and the OPEC I oil shock in 1973/74. What followed after the supply shocks and the increased uncertainty that accompanied it,

[55] Growth figures taken from Cameron and Neal (2003).
[56] We mention this just in passing, there is no opportunity to go further into these interesting matters here.

was, as we know, stagflation, new macroeconomic ideas and lower and less stable growth rates..

The MODIS model continues to serve as the workhorse of the national budgeting. The lack of behavioural equations became more of a disadvantage in the more volatile environment. Price forecasts were included in the national budgets from the early 1970s after having been kept out until then, perhaps out of fear that it would influence agents behaviour, particularly in the labour market. The detailed MODIS model had its strong points and could be used to pinpoint some targets.[57] The Scandinavian model of inflation became of increasing importance, but required adjustments in dichotomous industry division into the "sheltered" and "exposed" industries. MSG continued to be used for LTPs, but the LTP presented in 1977 for the 1978-81 period had to be withdrawn and revised one year later as being much too optimistic, revealing perhaps weaknesses in the methodology of making assumptions for the long-run development.

For the further development of the Norwegian economic planning system we quote the summary of highest-ranking civil servant of the Ministry of Finance in an international presentation in 1978:[58]

> *1: Planning is the responsibility of the constitutional authorities
> *2: The planning units are an integral part of the government administration, not separate organizations;
> *3: The plans are not mere forecasts, but, to a large extent, actual programs of the government;
> *4: The plans are prepared within the framework of national accounts with the aid of disaggregated econometric models;
> *5: Central government planning is not highly detailed, but conceived in broad terms;
> *6: The main instrument of planning are fiscal and monetary policies, although in some areas regulatory laws or agencies are also used; the fiscal and social security budgets are considered essential tools of national economic policy rather than merely financial statements of the governments revenues and expenditures.

As one can read out *1-*4 emphasize key elements in Norwegian planning which can be traced back to the very first national budgets, while *5 expresses that the detailed quantitative regulations to a large extent have become history. *6 points to fiscal and monetary policies as the main instruments, without being very explicit about how important regulations, such as for the credit market and the dwelling market, provided the background for the planning. By this time Norway had already entered into its petroleum era, although not very much had been oil and gas had been produced by 1978.

Erichsen elaborated upon how the impacts of the oil and gas was dealt with within the national planning framework, as he also did with the measures taken to counteract the severe international setback which hit the world from around 1974. The incomes policy was enhanced to become a very important policy element in the 1970s, and thus indicated the increasing role of bargaining as part of the central policy-making, making the overall

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[57] See Bjerkholt (1998), p.330 on the price forecasts of the mid-1970s.
[58] Erichsen (1978), pp.5. The author, Eivind Erichsen was the successor of Trygve Haavelmo as Bureau Chief in 1948.

picture of economic policy a much less clear-cut one than the original target-instrument structure. Although the 1970s are in some presentations considered as a period of crisis or even breakdown in the planning system, the Norwegian performance was not bad. Norway is an exception among OECD countries in having with higher average growth rate in the 1970s than in the 1960s.

In view of the several new challenges for macroeconomic stability that emerged in the new international environment in the 1970s the Central Bureau of Statistics researchers embarked on new lines of macroeconomic models, still build around an input-outoput structure, but taking into account more behavioural relations within the model and more simultaneity between different parts of the economy, also with more emphasis on econometric evidence.[59] The Ministry of Finance did not adapt its planning routines correspondingly and stuck steadfastly to the MODIS model until 1993.[60]

7. The limits to planning

The post-war economic reconstruction in Norway and European countries may be compared with the situation of the "transition countries" in Eastern Europe and the former Soviet Union from 1990. There are, of course, vast differences in their situation, but also important coming features. The strategic choices with regard to how to achieve a "normal situation" differed considerably among the transition countries and, the transition caused in most countries reductions in GDP and severe social and economic problems for the population. Approaches similar to that pursued by Norway after 1945 were not chosen, perhaps, first, because central planning was part of the system the transition left behind as a negative legacy of the past. Secondly, it was far away from the advice received by international advisers, especially those representing financial resources for the transition. Last, but not least, the transition took place in a world of relative stability and with internationally functioning markets in the non-transition industrial world. But a common feature of the transition countries and the OEEC countries almost 50 years earlier was that their strongest economic ties were with other countries in the same situation.

There is not opportunity here to go deeper into the post-1990 transition problems, but if we had looked into it we could have sampled examples of how attempts to take a giant step into a market economy failed bitterly because the institutions had not been adapted and reformed to support it. One could also find many examples of disastrous developments with regard to the income distribution, social welfare etc, because the transition was undertaken with very little in terms protective measures of the kind put in place in post-war European countries.

"Planning", in particular "economic planning", has, as a result of the political collapse of practically all countries which were once counted as "centrally planned economies", became discredited as a term. Institutions have been renamed as a result of this, but the pertinent question is how planning and markets function together in modern economies. One could even ask whether planning, considered as above, as government policy

[59] In particular the MODAG model, see Bjerkholt (1998), pp. 330-333.
[60] See Bjerkholt (1998), p.331. The model's 35 years in service as the most important analytic tool for the government in economic policy analysis may be hard to beat!

decisions chosen to fulfil politically determined targets or preferences and with due regard for the functioning of the economy, or markets in usually sense of competitive markets, have the upper hand, in the influence over the development of the economy.

It is almost trivial to point to the fact that modern societies must have elements of both social and economic planning as well as market mechanisms. An interesting discussion of this issue was given by Leif Johansen in a public lecture in 1980.[61] Johansen pointed out that economic decisions could be grouped in three groups: a) individual decisions taken by economic agents in a without coordination others; b) decisions taken through bargaining between different parties, between organizations as in the labour market of countries with high unionization, or between organizations representing economic agents and the government, or even between political parties as representing different segments of the society; and c) decisions taken by the central government authorities (assumed here to be authorized through democratic elections). Johansen argued that, although these decisions were not always so easy to divide into clearly defined categories, there seemed a drift from a) to b) and c), but also from c) to b), perhaps to the extent that 'bargaining economy' would be a more apt characterization of our economic system than 'mixed economy'.

Johansen further recapitulated the advantages of a price and market mechanism with regard to coordination and efficiency as tools in a decentralization of decisions and governing of the economy, but also some of the limitations in the use market mechanisms when there are market failures of different kinds, in long-term decisions for which the market does not provide sufficient information, etc. Johansen expounded the view that the general development of modern societies goes in the direction of expanding the area where market mechanisms cannot function well and weaken the conditions for market mechanisms to work successfully on others.[62] Certainly this view, although not necessarily wrong, runs counter to some recent tendencies to introduce market mechanisms in areas traditionally considered as belonging to the sphere of central government planning, such as health, education and other parts of the modern welfare state.

Although Johansen's discussion is somewhat coloured by the economic conditions at the time (perhaps also by his Marxist convictions as he explicitly refers to Marx' *dictum* about the increasing social character of production), he nevertheless points to key issues in the planning vs. market problem. He argued that the market mechanisms ruled in some areas where it ought to be constrained and vice versa was constrained in some areas wher it ought to be given freer reigns. He pointed to the need to use the market mechanism to exploit its advantages and in this connection argues that efficient markets is not something that will appear by itself if the government keeps out of the picture, but on the contrary may require a strong government authority to ensure the proper functioning of markets. He also pointed that when it is recognized that a certain area of the society cannot be left to the market alone, it often is a tendency to intervene in a way that creates unclearness about responsibilities and "the questions to be decided end up in a force field where enterprises, financial institutions, organizations, local authorities and central

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[61] Johansen (1983). The lecture was titled "Plan or market".
[62] Johansen (1983), p.71.

authorities and often other institutions as well exert influence without the final decisive power being placed anywhere and such that the institution which formally has the decision authority, is able to exert that in a firm way."[63]

Although the kind of situations described by Johansen may reflect exactly what many find essential in a modern democracy with many interests represented in any question of importance, he points out that "system fatigue" and inability to reach good solutions may be the consequence. From this may emerge what Johansen calls "market nostalgia", introduction of markets to decide more of the development in the society under old-fashioned free market conditions, or, as his preferred alternative, a society based more on social planning. Johansen's contributions already 25 years old and the development since then may be considered to be closer to be a rise in "market nostalgia" than a revival of planning, both nationally and internationally.

Johansen does not argue explicitly for "rules rather than discretion" to quote the title of the famous article by Finn Kydland and Edward Prescott from 1977, which was part of the basis for the Nobel Prize in economics they were awarded in 2004, one may impute to him on the basis of his lecture article certain viewpoints in that direction.[64] Kydland and Prescott's contribution in this article can be characterized as setting "limits to planning", in the way the authors' show that government planning cannot be both consistent over time and efficient when the planning can be conceived as a game against rational economic agents. The importance of this argument seems perhaps less convincing today and hardy supports a general conclusion that markets are always to be preferred over planning, as it has been interpreted. The core of the Prescott and Kydland argument may instead be considered as exemplifying an instance of "system fatigue", corroborating Johansen's argument that planning is more difficult than conceived, say, by Oskar Lange or Ragnar Frisch.

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[63] Johansen (1983), p.74.

[64] Kydland and Prescott (1977) acknowledged comments from Johansen, which, of course, does not necessarily imply that he shared the views and conclusions expressed in the article.

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