

Salvador Allende's development policy: Lessons after 50 years

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Abstract

Last year, 2020, was the 50th anniversary of the opening of the 'Chilean road to socialism' by Salvador Allende. Although the Allende government is the political reference for the 'socialism of the 21st century' in Latin America, international supporters tend to disregard the primary cause of its downfall, focusing instead on the circumstances of Allende's death. This article explains the link between the Allende government's development policies and its macroeconomic outcomes between 1970 and 1973. It finds that Chile's economic collapse had an endogenous cause related to government policies. This supports the views of Mises and Hayek on the feasibility of socialist economic policies. Policymakers and commentators should recognise essential lessons from the Chilean experience to learn from past errors and effectively promote Latin America's economic development.

KEYWORDS

big data, Chile, economic calculation, poverty, property rights, socialism

JEL CLASSIFICATION

B53; N16; O10; P20; P30

The recognition of the insuperable limits of his knowledge ought indeed to teach the student of society a lesson of humility which should guard him against becoming an accomplice in men's fatal striving to control society – a striving which makes him not

only a tyrant over his fellows, but which may well make him the destroyer of a civilization which no brain has designed but which has grown from the free efforts of millions of individuals.
— F. A. Hayek (1974)

1 | INTRODUCTION: WHY THE CHILEAN SOCIALIST EXPERIENCE IS WORTH STUDYING

The title of this article refers to one of the most important events of the twentieth century in Latin America. Last year, 2020, was the 50th anniversary of Salvador Allende's electoral triumph in Chile, marking an unprecedented milestone: it was the first time in the Western world's history that a Marxist candidate was democratically elected as head of a government.

The government of President Salvador Allende influenced the Latin American and the world Left, which created a great wave of sympathy in its favour. While the Cuban revolution had strengthened positions in support of armed struggle, Allende's experience served to support those seeking to advance towards socialism on the democratic path. Indeed, after the fall of the Berlin Wall, the Soviet Union's implosion, and the end of the cold war, Latin American socialism abandoned Marxism–Leninism and largely embraced Salvador Allende's legacy to build socialism through the ballot box (Ramírez, 2017). Thus, Allende's followers in the 'socialism of the 21st century' recommend abolishing private property and using new computer resources, such as big data and machine learning, to promote efficient socialism through the algorithmic regulation of the economic system. These assumptions are based on Project Cybersyn created by Stafford Beer, who sought to build controlled economic planning in real time under the Allende government, to be thwarted by the 1973 military coup (Medina, 2006). According to his supporters, Allende's political strategies would boost the economic development of modern socialist countries.

Surprisingly, despite the extensive literature on the Allende government, there are still controversies about economic outcomes of Chilean socialism. This is essentially because the most widely accepted belief was expressed by Rosenstein-Rodan (1974, p. 7), who argued that Allende's economic downfall "had nothing to do with socialism [because] it is not inherent in socialism to be inefficient". Thus, any claim that the economic system's collapse was due to Allende's plan, which consisted of a short-term Keynesian policy and a long-term Marxist policy, was ignored. This fact led to the assertion that Chile's socialist experiment was a success frustrated by circumstances external to Allende's development policies, such as the US government's intervention. Consequently, research on that period too often disregards economic theory about how the dynamics of socialism foster the vicious circle of poverty.

For an international audience, this raises the question: what was the ultimate cause of the Allende government's economic disaster? This article explains the development policies promoted by Salvador Allende with their core macroeconomic outcomes between 1970 and 1973. More specifically, Mises and Hayek's theory of socialism is applied to the Chilean experiment, since it provides praxeological chains of cause and effect explaining the essence of economic underdevelopment.

The article proceeds as follows. Section 2 briefly describes Mises and Hayek's theory of socialism and reveals its significance for development economics. Section 3 applies this theory to the economic consequences of the Allende government's development policies. Section 4



discusses Project Cybersyn. Section 5 examines the claim that US government intervention was the real cause of Allende's failure. Section 6 concludes with a discussion of lessons for the future.

2 | SOCIALISM AND UNDERDEVELOPMENT

The concept of socialism appeared in the 1830s almost simultaneously in Britain and France, in the ideas of the followers of Robert Owen and Henri de Saint-Simon, including Pierre Leroux and, later, Karl Marx and Friedrich Engels, who popularised the term in its modern sense (Vidal, Smith, Rotta, & Prew, 2019). This approach explains Marx's emancipatory vision of a post-capitalist society. More specifically, the theory of socialism may be "summed up in the single sentence: Abolition of private property" (Marx & Engels, 1848, p. 498). Consequently, the meaning of socialism is related to the expropriation of the means of production to achieve a true harmony of collective interests.

The Merriam–Webster Dictionary defines socialism thus:¹

- 1: *any of various economic and political theories advocating collective or governmental ownership and administration of the means of production and distribution of goods;*
- 2 a: *a system of society or group living in which there is no private property;*
b: *a system or condition of society in which the means of production are owned and controlled by the state*
- 3: *a stage of society in Marxist theory transitional between capitalism and communism and distinguished by unequal distribution of goods and pay according to work done*

Classical liberals argue that a proper understanding of how society and the market work as a spontaneous order resulting from millions of human beings' interactions indicates that socialism is an intellectual error and, therefore, theoretically and practically impossible.² Mises and Hayek's contributions propose the basic idea that, without private property, there can be no rational economic calculation (see Boettke, 2019).

The essential contribution of Mises (1920) was to discover that the market is a dynamic process of property right exchanges, driven by the innate creative enterprise of individuals in identifying and solving human problems.³ Thus, the information continuously created and transmitted in the market process arises from the private ownership of the means of production (that is, all those specific things that actors consider *subjectively* useful to achieve their ends through a temporal process of successive stages). Subsequently, historical exchange relations in monetary units generate market prices, which transmit information on the relative scarcity of goods and services that people *subjectively* value, as suppliers or demanders, participating in the market or refraining from doing so.

Market prices generate incentives for action and constitute a distribution criterion. According to Mises (1949), consumers' subjective appraisals tend to determine the prices of consumer goods. For their part, entrepreneurs estimate the prices at which they can sell their products and their decisions set the price of the different factors of production. In the context of private property of the means of production, market prices are used to perform economic calculation, understood as individual judgments in monetary units on the various courses of action. Prices can also guide entrepreneurs to find new solutions to scarcity problems, develop substitute goods, and look for new alternatives.

Furthermore, Mises (1922) suggests that there will be no market without private property of the means of production. Without a market for the means of production, there will be neither money nor prices for goods and services. Without market prices, which reflect the relative scarcity of capital goods, economic decision-makers will be unable to calculate the alternative uses of capital goods rationally. When private property is abolished, rational economic calculation is unachievable. If socialist economic calculation is impossible, there can be no economic activity in the real sense of the term. In small and insignificant things, rational action can persist. However, for the most part, national production could not be consciously economical. Therefore, the notions of market socialism and planned economy are oxymorons because (a) socialism implies the abolition of the market, and (b) socialism is not economics at all.⁴ As Mises (1927, p. 184) puts it, socialism “cannot attain the ends that its advocates intend it to attain”. Consequently, without economic calculation, human actions, far from being harmonious as Marx predicted, will be dynamically inefficient:

To suppose that a socialist community could substitute calculations in kind for calculations in terms of money is an illusion. In a community that does not practice exchange, calculations in kind can never cover more than consumption goods. They break down completely where goods of higher order are concerned. Once society abandons free pricing of goods, rational calculation becomes impossible. Every step that leads away from the private property of the means of production and the use of money is a step away from rational economic activity. (Mises, 1922, p. 119)

Following these contributions, Hayek makes three key extensions of Mises's theory of socialism. First, Hayek (1945) explores the dispersed nature of human knowledge and the role of market prices in coordinating individual plans for the best possible and cheapest satisfaction of people's wants. Second, Hayek (1988, ch. 5) shows that individuals' choices are innately indeterminate and unpredictable in their preferences, expectations, and knowledge. By contrast, socialist economists neglect the challenge of economic calculation because they adopt the static approach of mathematical economics.⁵ If all inputs, outputs, and equilibrium prices can be computed, and production functions can be defined, the profits for any economic activity can be predicted quantitatively. If this is the case, human action is a metaphor in which zero-intelligence agents replace the flesh-and-blood entrepreneur (Ebeling, 2015). However, the coordination of individual plans requires a vision of people's expected future aims and means; but it is impossible to transmit information that has not yet been created by human action.

Third, Hayek (1944) explains that socialism's nature is one of institutional violence on the part of a governing body in imposing specific goals and world views. Socialism's dynamics generate uncoordinated activity and social disorder by making it impossible for people to act according to the profit and loss method, which makes it difficult for them to orient themselves towards others' needs. Hence, socialist coercion tends to confiscate private property to force people to act differently from how they would otherwise. If the free exercise of entrepreneurship is restricted, and an attempt is made to organise society from above by coercion, entrepreneurs will cease even to be aware of the information they fail to perceive and create, regardless of their expertise or professional or managerial qualifications. Accordingly, socialism distorts economic calculations or makes them impossible.

The consequent economic, technological, and cultural decline increases uncertainty and makes entrepreneurship even more difficult. The decline in entrepreneurship will become more significant as coercion increases; and this process leads to corruption as people perceive that it



is more beneficial to influence the political and bureaucratic structures of the governing body. Therefore, the traditional concepts of the rule of law and impartial justice are replaced by 'social justice', based on the emotional and arbitrary preferences that promote legal inequality (Hayek, 1976). Social justice implies the confiscation and transfer of resources according to the arbitrary criteria adopted by the members of the central planning body.

Social conflicts tend to generate political justifications for increasing doses of intervention that, like all drugs, produce addiction and intellectual rigidity in a degenerative course towards servitude and poverty (see Ikeda, 2004). Thus, socialism tends inexorably towards totalitarianism and, therefore, is a drag on economic development, which implies shrinking the range of alternatives open to people as consumers and producers (see Espinosa, Wang, & Hai-Jiu, 2020). This does not mean that private economic calculation always guarantees the most dynamic and efficient social coordination. Perfect solutions are beyond human possibilities. However, free from the obstacles of the state's arbitrary criteria, the dynamic market process is the only mechanism compatible with the creative and entrepreneurial nature of purposeful human action (Kirzner, 2017). Hence, entrepreneurial market competition tends to drive economic improvement by widening the range of effective choices in a dynamic division of knowledge and labour specialisation, like a coordinated social 'big bang'.

Finally, economic development is possible only when, first, the right to private property is respected in a society based on contractual ties; and second, attacks on private property and violations of contracts are punished. In other words, "higher risks of confiscation (i.e., political instability, public sector corruption, lack of public order, arbitrary institutional arrangements, manipulation of the money and credit supply, high risks of default, taxes, and expropriation regulations) tend to anticipate decreasing levels of accumulation and maintenance of capital, which weaken entrepreneurial and economic development" (Espinosa, 2020, p. 84). These interventions affect people's ability and willingness to look beyond the immediate present and take a long-term view in adopting new ideas and incurring risks. As Mises and Hayek conclude, anyone who wishes to promote economic development must encourage and encourage free entrepreneurship; by contrast, whoever prefers social conflicts must put all kinds of obstacles in the way of entrepreneurship.

3 | THE SOCIALISM OF SALVADOR ALLENDE (1970–73)

In the 1970 presidential elections, Allende became President of the Republic of Chile with 36 per cent of the vote, while the opposition, divided between the right-wing Jorge Alessandri Rodríguez (34.6 per cent) and the Christian Democrat Radomiro Tomic (27.8 per cent), outnumbered the Unidad Popular (UP), Allende's left-wing ruling coalition.⁶ The Allende government remained in a minority position in parliament throughout its existence (see e.g. Collier & Sater, 2004, ch. 12). However, the Allende government marked a historic milestone by effecting a transition to socialism through the existing institutional structures. In the words of Pedro Vuskovic, minister of the economy, shortly after Allende took office, "state control is projected to destroy the economic base of imperialism and class domination by ending private property of the means of production" (Moss, 1973, p. 59). Accordingly, the UP's socialist experiment is a compelling case study of Mises and Hayek's challenge to socialist thinking.

According to Corvalán, Rodríguez, Morales, and Chonchol (1969), the UP's basic programme had two main axes. On the one hand, Allende contemplated a new constitution to establish "a single organization of the State... as the highest directing body of power" (p. 15).

Thus, parliament would be replaced by a people's assembly controlled by the governing body to "constitute a national planning system, and its mission would be to direct, coordinate and rationalize" (p. 16). Likewise, Chile's Supreme Court would be controlled directly by the governing body to implement social justice. On the other hand, Allende's development policy was expropriation and control of the production and distribution of goods and services. In particular, the UP planned to confiscate all strategic enterprises, such as:

Large-scale mining, the financial system, especially private banking and insurance; foreign trade, large enterprises, and industrial monopolies, production, distribution and consumption of electrical energy, rail, air, and maritime transport, communications, production, refining and distribution of oil and its derivatives, liquefied gas, the steel industry, cement, petrochemicals, and heavy chemicals, cellulose and paper. (Corvalán et al., 1969, p. 20)

The pathway to the abolition of property implied three additional strategies: first, the control of prices and wages to "guide the productive capacity of the country towards the production of cheap and good quality popular consumer articles" (p. 23); second, the control of the "flow of money towards the real needs of the market, together with the redistribution of credit and the avoidance of usury in the money trade" (p. 23); and third, "a foreign trade policy aimed at developing and diversifying exports, opening new markets, achieving self-financing by setting the conditions under which the non-expropriated capital will operate" (p. 24). According to Allende, these development policies "would guarantee rapid and decentralized economic growth, seeking the optimal use of resources to increase production compatible with a more dignified and humane life" (p. 24).

The UP programme was implemented in three stages, although not in a very well-defined chronological sequence. The expropriation, inflation, and rationing stages had a unifying feature in assuming total control of Chile's economic, political, and social system. First, the Marxist expropriation process aimed to transfer private property of the means of production to the Social Property Area, controlled by UP members. Allende relied on legal loopholes to achieve this objective: the use of forgotten provisions or legal loopholes or the distorted interpretation of administrative norms to achieve confiscation under the cloak of apparent legality (Fontaine, 1999). Expropriation began with large mining enterprises. In July 1971, Law N° 17,450, approved unanimously by the parliament, allowed the government to confiscate 100 per cent of the large copper, coal, iron, and saltpetre mining operations. Allende reduced the compensation to zero by citing the excessive profits that the enterprises had obtained since 1965.

The agrarian reform was the government's instrument to take over the countryside. Although rural expropriations began in the 1960s with Law No. 15,020 (approved in 1962 under the conservative government of Jorge Alessandri Rodríguez and modified under the government of Eduardo Frei), Allende resorted to legal loopholes to confiscate all the privately owned farms of more than 80 hectares without paying compensation. By 1973, the agrarian reform of Frei and Allende had confiscated more than 10 million hectares, that is, almost 6,000 properties corresponding to 60 per cent of the country's agricultural land, along with more than 2,520 illegal occupations of agricultural properties (*tomas*) by extremist groups in collusion with members of the UP (see Meller, 2000, pp. 50–3). Paradoxically, Allende did not give any private property title to the people, while the *interventores* controlled the confiscated properties; the UP kept all the workers under the governing body's command.⁷ It is estimated that in 1965–73



these expropriations produced capital losses close to “130% of Chile’s GDP in 1973” (Larraín & Meller, 1990, p. 329).

In the early months of 1971, Allende expropriated a large part of the financial system through liquidation threats made by the Corporación de Fomento (CORFO), mostly private banks and insurance enterprises. At the same time, Allende gave CORFO the power to buy bank shares at artificial prices and threaten bank shareholders with direct intervention. The government also began to intervene in the banks under the pretext of alleged financial irregularity or labour problems that prevented the banks’ regular operation. In this context, private shareholders decided to sell massively to the Allende government. In November 1971 finance minister Américo Zorrilla said that “the nationalization of the banking system is complete. The state controlled seventeen banks that together provide 90% of all credit” (De Vylder, 1974, p. 161). Finally, in just over a year, CORFO acquired majority control of 14 of these banks (which went to the public sector) and control of 30 per cent of the three other banking institutions (which remained partially under private management). In September 1973, the UP controlled 85 per cent of Chile’s financial system by means of which to grant politically inspired loans.

Between 1970 and 1973, Allende carried out a critical extension of the Social Property Area through the massive expropriation of enterprises to complete Chile’s journey to socialism. However, entrepreneurs put up strong resistance to confiscation, much more so than in mining and banking, and comparable to farmers. Their resistance included taking legal action against the government, to which the courts were sympathetic, and even the absolute physical defence of the properties. However, Allende resorted to Decree-Law No. 520 (August 1932), which allowed the expropriation of enterprises in case of productive recession, property hoarding, or idle productive capacity in times of scarcity.⁸ But the expropriation law required full cash compensation, as determined by an independent court. Allende then resorted to another little-known law, the Decree for the Resumption of Operations, enacted in the early 1940s, which allowed intervention without compensation when a work stoppage was caused by labour disputes in strategic industries. Labour disputes would then be incited by government supporters or would erupt spontaneously to provoke intervention. By this time, an affected company’s financial situation had already deteriorated, and many owners were willing to sell their enterprises to the government.

In July 1973, Jorge Godoy, the minister of labour, reported that 35,000 enterprises were occupied through various procedures (Rojas, 2003). As if this were not enough, in September 1973 CORFO “controlled or had significant control in 507 enterprises. Of these, 259 had been assumed through intervention without an actual transfer of ownership” (Larraín & Meller, 1990, p. 331). The public sector increased its participation in productive activities to unprecedented levels. According to Hachette and Lüders (1987), given 1965 as the base year, government enterprises increased their share of public services production from 25 per cent to 100 per cent in 1973. Allende also controlled 85 per cent of the total banking sector and mining, 70 per cent of transport and communications, and 40 per cent of industry. Overall, Allende achieved direct control of 39 per cent of the country’s production (excluding agriculture).

The second, inflationary stage had its origin in the UP’s desire to use Keynesian macroeconomic policies to achieve an accelerated redistribution of resources. More specifically, Allende applied, on the one hand, expansionary monetary policies (increases in monetary and credit issuance) and, on the other, expansionary fiscal policies (increases in public spending charged to current taxes, i.e. direct, indirect and inflationary, in addition to future taxes, i.e. public debt),

whose short-term effect was a spectacular increase in the economic growth rate and in real wages with lower inflation rates. This explains the period of economic boom until the end of 1971, with a systemic triumph among the socialist governing body members. As Table 1 shows, the GDP growth rate was 9 per cent in 1971 against 2.1 per cent in 1970, and, in the same years, inflation was 22.1 per cent against 36.1 per cent, unemployment was 5.5 per cent against 7.1 per cent, and the annual increase in real wages was 22.3 per cent against 8.5 per cent.

In 1972, the expropriations, the growth of aggregate demand, in addition to price and wage controls for more than 3,000 products, generated the perfect storm for the progressive decline of public finances. According to Balassa (1984), the price system was severely distorted, which caused poor investment decisions that led to massive bankruptcies of private enterprises; regulations produced shortages of supplies and black-market prices up to ten times higher than most products' official prices; the external sector was the escape valve for entrepreneurs and, therefore, capital and foreign exchange became scarce; and all of this reduced demand for government-issued money, leading to accelerated inflation, demonetisation of the economy, and rapid decline in real wages. In short, socialist development policies made economic calculation extremely difficult, which entailed the public sector's dynamic inefficiency and the national economy's collapse.

In 1973, the public sector was financed through increasingly expansionary monetary and fiscal policies with more detailed controls on prices and wages in a vicious circle. Moreover, the nominal tariff rates for "manufactured articles averaged 111% and the effective protection rates 182%" (Balassa, 1984, p. 50). Imports were expensive and subject to price controls as a result of the import substitution bias. Allende also demanded an initial deposit from importers of 10,000 per cent, gradually increasing the products' included prices. A fixed exchange rate regime was then imposed with periodic devaluations, which led to the appearance of multiple exchange rates up to 41 times higher on the black market, increasing the investment risk for entrepreneurs (see Meller, 2000, pp. 45–7). Thus, the GDP growth rate was –5.6 per cent in 1973 against –1.2 per cent in 1972. Likewise, the low unemployment rates of 4.8 per cent are explained by the high fiscal deficit of –10.5 per cent to keep more workers in the public sector. This fostered an inflation rate of 606.1 per cent, a fall in real wages of 38.6 per cent, a real interest rate of –80.2 per cent. As a percentage of GDP, capital formation fell 9.6 per cent, government credit

TABLE 1 Evolution of the main macroeconomic variables, 1970–73

Variables	1970	1971	1972	1973
GDP growth rate (%)	2.1	9.0	–1.2	–5.6
Inflation rate (CPI) (%)	36.1	28.2	255.2	606.1
Unemployment (national) (%)	7.1	5.5	3.8	4.8
Real wages (annual % increase)	8.5	22.3	–11.3	–38.6
Real interest rate (%)	–11.8	–10.3	–66.9	–80.2
Government credit (% GDP)	9.1	22.1	33.3	55.5
Current income of non-financial public sector (% GDP)	38.1	37.7	34.5	21.3
Savings of non-financial public sector (% GDP)	7.3	–1.8	–11.9	–19.8
Capital formation (% GDP)	10.4	10.5	9.6	8.4
General government deficit (% GDP)	–3.5	–9.8	–14.1	–10.5

Sources: Meller (2000); Braun et al. (2000)

TABLE 2 Selected components of the balance of payments (US\$ million), 1970–73

	1970	1971	1972	1973
Total exports (FOB)	1,112	999	849	1,309
Copper exports	839	701	618	1,049
Total imports (CIF)	956	1,015	1,103	1,447
Food imports	136	192	318	512
Capital goods imports	276	248	186	243
Trade balance	156	–16	–253	–138
Current account	–81	–189	–387	–295
Balance of payments	114	–300	–231	–112

Source: Meller (2000)

reached 55.5 per cent, current public sector income dropped 21.3 per cent, and public sector savings plummeted. 19.8 per cent (Table 1).

The final, rationing stage began in the second half of 1972 as a result of the entry barriers to entrepreneurship that restricted the production system (Table 2). Faced with the collapse of economic activity and Allende's resistance to applying orthodox adjustment policies (i.e. monetary and fiscal austerity, price liberalisation, and elimination of entry barriers), the authorities claimed that “scarcity and the black market are due to the counterrevolutionary political action of reactionary groups and enemies of the people. It is a lie to attribute current problems to lousy government policies” (Larraín & Meller, 1990, p. 345). In line with this, Allende instituted the *Juntas de Abastecimiento y Control de Precios* (Boards of Supply and Price Control) to define Chilean families' *real* consumption needs.

Chilean historian Gonzalo Vial (2005) explains that popular support for bringing an end to Allende's socialist experiment had a double cause. First, Allende's development policies produced an economic disaster (generalised scarcity and a level of poverty above 50 per cent), a political failure (the virtual neutralisation of the opposition and other powers of the state), and social chaos (high risk of civil war). The result was a crisis of ungovernability that left more than 111 dead and 1,126 injured in the political violence between 1970 and 1973. Second, the *Unidad Popular* launched the *Escuela Nacional Unificada* (National Unified School) to instruct young people in the service of socialism. However, in the elections of 4 March 1973, opposition parties obtained 57.4 per cent of the vote in the Senate and 55.5 per cent in the Chamber of Deputies. Subsequently, on 22 August 1973 the Chamber of Deputies approved a motion (by 63.3 per cent of the vote) that held the government of Salvador Allende responsible for the systematic violation of the Constitutional and Legal Order of the Republic (see Pareto & Guerrero, 1973). These events were the most significant triggers of the military coup, Allende's death, and the end of the UP government on 11 September 1973.

4 | ALGORITHMIC PLANNING IN CHILE

There is another story about the ‘real cause’ of the Allende government's failure, which has been little discussed in scientific studies. This concerns Project Cybersyn (cybernetic synergy) to administer the socialist economy through dynamic regulation based on data (Loeber, 2018).

Specifically, between 1971 and 1973 UP members set up a technological system led by Anthony Stafford Beer, a British academic and consultant specialising in organisational cybernetics, to coordinate economic activity in real time. Beer proposed to implant an electronic nervous system in Chilean society in which the knowledge of planners would be based on data-driven policies (Beer, 1972). These developments were based on a model of an autonomous system's organisational structure capable of reproducing itself in a changing environment.

Allende had an operations room from which he would receive the entrepreneurial information necessary to control the economy efficiently. However, the room was destroyed on 11 September 1973 with the bombing of the government palace. It is often argued that, if the military coup had not taken place, Project Cybersyn would have driven unprecedented economic development through central planning. In the words of Raul Espejo, one of the Chilean computer scientists who were part of the team that developed Cybersyn, "a longer period of implementation, uninterrupted by the coup of September 1973, would have supported this requisite learning to build a more humane and just social nature in the Chile of the 1970s" (Espejo, 2009, p. 79).

While modern economists mostly agree that the dispersed and proprietary knowledge of individuals is decisive for economic decision-making, some suggest that "it is incorrect, or at least, outdated, to claim that designers of regulations cannot improve upon market outcomes, given current and conceivable computing methods" (Devereaux, 2019, p. 141). Following the Cybersyn experience, advances in computational and machine learning methods in big data could feasibly design an institutional constraint that overcomes the economic calculation challenge revealed by Mises and Hayek (Bowles, Kirman, & Sethi, 2017).⁹ But is it possible to coordinate society based on coercive mandates using computer resources?

Mises and Hayek's theory of socialism is categorical in pointing out that sheer ignorance about the creative potential of human action leaves the actor facing intractable uncertainty. If the actor possesses innate creative and entrepreneurial ability, what are the effects of choosing one course of action over others? The variety of potential alternatives that can be imagined or realised will expose the actor to consequences that a different choice would have ruled out. The meaning that the actor assigns to the alternative actions, and to the consequences of responsibility, cannot be known in advance, nor can they be sufficient to provide knowledge of an option to be made. It cannot be known in advance how future choices will affect the continuation of the action. Deliberation implies supporting the action on the assumption of intuition about its expected effects and assuming that the nature of things and their form in the present can carry some restrictions (see Shackle, 1982). The choices open to human action depend on the consequences of the creative and entrepreneurial potential of what does not yet exist. Accordingly, quantitative prediction about the future is impossible because it depends on actions that have not yet been taken.

Computers can process only historical data that have already been articulated in specific observational situations. However, they will never generate new information *ex novo* about as yet undiscovered situations in which knowledge of human action is subjective, tacit, and dispersed by the dynamic market process. Paradoxically, the development of computer systems further increases the complexity of the governing body's problem. The practical knowledge of human actions generated with the aid of such systems will become more complex, voluminous, and rich as civilization advances.

Explanations of phenomenological concepts with natural sciences methods could, at best, express an unbiased estimate. Attempts to justify claims based on sensory evidence must make inductive generalisations from observed historical facts, resulting in arbitrary criteria because

individual ends and means maps are not given as in the natural sciences. This approach implies imposing a unitary scale of concrete ends about what is more and less important for society. Then, the problem of socialist calculation arises: institutional coercion distorts or eliminates market signals to economise on scarce resources. As Huerta de Soto wrote, “if the governing body intervenes coercively in the market process, it will destroy the process’s ability to create information, and if it does not intervene, it does not obtain any information either” (2010, p. 56). Accordingly, the argument that Project Cybersyn would have saved socialism can be rejected, just as big data and machine learning have not saved modern socialist economies from economic downfall.

5 | THE INTERVENTION OF THE US GOVERNMENT

Previous sections have revealed the external validity of Mises and Hayek’s challenge to socialist calculation. However, another prevalent myth is that the ‘real cause’ of the Allende government’s downfall was an omnipotent and perverse enemy’s interference: the US government led by President Richard Nixon (Rojas, 2003). According to this belief, economic crisis and widespread protests against the Allende administration were not consequences of the UP’s development policies.¹⁰ Instead, the White House sabotaged Allende’s democratic road to socialism through its Chilean pawns. But what was the true scope of the intervention of the US government in Chile?

While it is true that the US government never looked favourably on Allende, its intervention in Chile was clumsy and unsuccessful (see Schiappacasse, Medalla, & Sánchez, 2012, pp. 169–73). First, in the 1964 presidential elections in Chile, the US government donated several million dollars to the campaign of Eduardo Frei Montalva, the Christian Democrat candidate, in order to defeat Salvador Allende, the Marxist candidate ranking second in the opinion polls. This help contributed to Frei’s victory. However, the key to Allende’s defeat was the decision of the political right to support Frei’s candidacy unconditionally. Second, in the 1970 presidential elections, the White House, confident that the right-wing candidate Jorge Alessandri Rodríguez would win, donated only one million dollars to his campaign, but Allende won because the non-Marxist political forces were fragmented.

Third, when Allende won the 1970 election, the US Central Intelligence Agency (CIA) tried unsuccessfully to prevent the parliament from ratifying his triumph. The CIA was also involved in assassinating the commander-in-chief of the Chilean army, General René Schneider. Fourth, Nixon reduced direct and multilateral economic aid to Chile (e.g. through the Inter-American Development Bank and the World Bank) because the White House would not help a government that damaged its political and economic interests. Again, Allende expropriated large amounts of US capital without compensation, and aspired to make Chile a satellite of Soviet communism in Latin America (‘a second Cuba’). But the United States’ economic aid was partly offset by loans and gifts from the communist bloc and some capitalist countries, such as Italy, Belgium, France, West Germany, and Canada. Specifically, the Allende government “obtained credits for more than 600 million dollars” (Israel, 2006, p. 185). Allende even persuaded US banks to grant him loans for a debt restructuring in early 1972, and he had no problem exporting copper.

Finally, the White House mobilised the so-called 40 Committee, a semi-clandestine organisation, which produced a total of \$8.8 million in support of opponents of the Unidad Popular, of which \$6.5 million was disbursed in 1973. These resources were used to sustain the press,

enterprises, political activism, and support for opposition mobilisations that were persecuted and harassed by the UP government. Again, the total amount of resources destined for the opposition was markedly less than the foreign aid to the Allende government. There was, therefore, no world capitalist plot against Allende. Instead, Allende's economic advisers' bad policies destroyed the Chilean economy. Could the CIA have initiated the extensive expropriations and large-scale wage and price controls that led to corporate bankruptcies, a mounting budget deficit, rampant inflation, and a black market, which resulted in a general decline in economic activity, if Allende controlled the central bank and most of the national production with the support of the communist bloc and many capitalist countries? In sum, only a defective analysis would exaggerate the importance of the US government's intervention. It would be to evade the theoretical and practical problems of socialist calculation.

6 | LESSONS FOR DISCUSSION

The theory of socialism endorsed by this article offers an explanation of why Allende's socialist experiment spawned economic, political, and social disaster. As Mises and Hayek predicted, if the government controls prices and production, there can be no market prices; therefore, 'economic' calculation is impossible (i.e. socialism is not economics at all). Indeed, the Allende programme's objective was to reorient the Chilean economy towards an aggressive confiscation of private property. Centralisation of political power, corruption, black markets, and high poverty levels were the inevitable outcomes of economic central planning. Similarly, the external validation of Mises and Hayek's challenge demystifies the hypotheses about Project Cybersyn (and later big data and machine learning) and the US government's intervention as the real causes of the economic crisis of Allende.

Even more critical are the remote consequences of central planning. The saving and productive investment (i.e. guided by market price signals) of private enterprises and citizens are reduced by the high risks of property confiscation. How should capital be forthcoming if domestic capital formation and foreign capital inflows are expropriated? This disintegration of the capital market in a socialist community worsens the plight of underdeveloped countries. As Mises said, it is impossible to "imitate the technological procedures of the capitalistic countries if there is no capital available" (1952, p. 170). The governing body supports the new masses of the poor and unemployed through greater confiscations from the productive sectors. Socialist policies themselves are the main obstacle to economic development.

The goal of this article has been to shed some light on the myths surrounding the government of Salvador Allende using the analytical theory of socialism of Mises and Hayek and illustrative data about Chile's economy in 1970. The effects of Allende's development policies are not something that should surprise us. They were the logical consequence of violating the essence of economic phenomena: the purposefulness of human action. This must be recognised if the aim is to promote underdeveloped countries' improvement rather than to pursue an unattainable utopia.

NOTES

¹ <https://www.merriam-webster.com/dictionary/socialism> (accessed 20 November 2020).

² For more historical details on the debate over socialist economic calculus, see Lavoie (1985) and Caldwell (1997).

- ³ As the essence of economic phenomena, entrepreneurship has a long-standing place in economic literature (Parker, 2018; Ravier, 2020; Shane & Venkataraman, 2000).
- ⁴ It is often claimed that the case of China is a refutation of Mises's and Hayek's theory. However, the history of China shows otherwise. Between 1949 and 1976, Mao Zedong destroyed private property, resulting in a subsistence economy with the murder of 70 million people through hunger, beatings, and disease. China's progress is explained despite the communist regime, especially by the market-friendly reforms of Deng Xiaoping between 1978 and 1989, and the high level of decentralisation and entrepreneurial competition (see Huang & Ge, 2019; Huang, Li, Ma, & Xu, 2017; Rabushka, 1987).
- ⁵ It is a mistake to "evaluate the strength and validity of Mises's argument applied in an economic system in which the extent of the market is constant [as in the natural sciences]" (Bylund & Manish, 2017, p. 429).
- ⁶ The Unidad Popular was made up of the Radical Party, the Socialist Party, the Communist Party, the Popular Unitary Action Movement and the Radical Left Party.
- ⁷ In Chile, Marxist-Leninist and Guevarist paramilitary fractions emerged, financially and logistically supported by Cuba, as a satellite of the Soviet Union in Latin America, to accelerate the proletarian revolution. Among them, the Revolutionary Left Movement (1967–), the People's Organized Vanguard (1968–71), the Popular Unitary Action Movement (1969–93), as members or supporters of the UP carried out attacks, robberies, kidnappings, and murders with impunity under the Allende government (see Schiappacasse et al., 2012).
- ⁸ This legislation had been passed by a 100-day socialist government that year, one of several short-lived governments that came to power during the chaotic early years of the 1930s. The legislation has remained in force, although it has never been used.
- ⁹ These ideas have been rediscovered in the so-called Cyber-Communism (Cyber-Com), which proposes eliminating private property to replace voluntary exchanges between individuals by computerised directive planning. Computer planning aims to equalise wage rates between men and women and between different professions and trades (see e.g. Cockshott, 2017).
- ¹⁰ The declassified CIA documents are available in Kornbluh and Block (2020).

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