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THREE ESSAYS ON THE PAST AND FUTURE OF SOCIALISM

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THREE ESSAYS ON THE PAST AND FUTURE OF SOCIALISM

A Dissertation Presented

by

MIHNEA TUDOREANU

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 2020

Department of Economics

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ABSTRACT

THREE ESSAYS ON THE PAST AND FUTURE OF SOCIALISM

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The idea of economic planning and state ownership of the means of production, which had been central to socialist economic thought for a century and a half, suddenly fell out of favor even among socialists after the fall of the Soviet Union. The three essays of this dissertation are in essence critiques of this 21st century orthodoxy.

The first essay addresses the idea of market socialism, as proposed by several academic works in the decades before and after the fall of the USSR. The essay questions whether market socialism would be substantially different from capitalism in practice. It aims to show that any economic system which is based

on market relations and atomized ownership of the means of production would feature a type of exploitation very similar to that found under capitalism, meaning that such a system would not be substantially different from a capitalist society with a welfare state.

The second essay is a study of a problem that may be faced by all planned economies. Historically, planned economies faced pressure to maintain old industries, old workplaces and old jobs, so as not to cause social disruption. There is a tradeoff between technological progress and job stability. This creates a dilemma: Can socialism keep pace with capitalist innovation while providing full job security? The essay explores this question and answers in the affirmative, with some qualifications.

The third essay aims to challenge the notion that socialist economic planning "failed" in the Soviet Union and East-Central Europe. It is an empirical study of the economic performance of the Soviet-type socialist economies under the stagnation conditions of their worst-performing decade, compared with the experiences of the same countries after the transition to capitalism. The findings suggest that although a few countries saw a net benefit from the transition to capitalism, the majority saw a net loss. The region as a whole also saw a net loss, and its current economic trajectory makes it unlikely that this loss would be offset by higher gains in the foreseeable future.

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INTRODUCTION

From the industrial revolution until quite recently, ideas proposing to radically transform society for the better were a central element of the global political landscape. Whether in the form of intellectual utopias or militant revolutionary movements, they have shaped our modern world in innumerable ways. And without a doubt, the most influential among them has been the idea of socialism. From its beginnings among social reformers and thinkers of the early 19th century, through its transformation into an international working class movement in the second half of that century, socialism came to dominate the politics, history and economics of the 20th century as a result of the Russian Revolution, the creation of the Soviet Union, and the post-1945 growth of an entire world system of socialist states. Whether one supported "actually existing socialism", or envisioned some different type of socialism, or opposed all types of it altogether, there could be no denying that the socialist idea (and by extension the broader concept of a radical restructuring of the economy and society) held center stage for the bulk of the 20th century.

But then, suddenly, it was gone. The defeat suffered by the Soviet Union and its allies at the end of the Cold War in 1989-91 marked far more than a shift in the geopolitical balance of power. It also deeply affected the intellectual landscape. Socialism - in *all* its many different versions and forms - found itself discredited. Although the Soviet system only represented one particular type of socialism, it had come to represent socialism-in-general in the popular imagination. The advocates of liberal capitalism declared -

somewhat prematurely - that the end of history was at hand. Socialist parties and organizations of many different orientations suffered extreme demoralization. Some political parties, such as the Italian Communist Party, even voted to dissolve themselves. But throughout all this, there were very few attempts to evaluate the legacy of the Soviet system and to determine precisely what had gone wrong. It was simply taken for granted that "socialism", in some grand sense, had failed, and that constructing a better socialist society would be either impossible or would require borrowing heavily from certain aspects of capitalist society (especially markets).

In the early stages of the Cold War, especially during the 1950s, the dominant Western view of the Soviet economy (and, by extension, any socialist planned economy in general) was that it achieved fast economic growth but was undesirable because it restricted individual freedom. By the time the Cold War ended, this view had radically shifted, and planned economies were seen as inherently prone to waste and inefficiency, and unable to produce adequate economic growth. The collapse of the Soviet socialist world system was taken as proof that the latter view was correct, although very little effort was made to investigate whether the actual causes of the collapse of the Soviet socialist system were in fact related to any inherent flaw of socialism (as opposed to simply being the result of historically contingent events). It was simply asserted, and believed, that because the socialist world system had collapsed, that meant that a socialist planned economy was inherently flawed and economically inferior. As a result, many former advocates of socialism abandoned it altogether and came to embrace various forms of social democratic

capitalism. Others sought to combine a commitment to a radical restructuring of economic life with a belief in the superiority of markets, and became proponents of various forms of market socialism. The idea of economic planning and state ownership of the means of production, which had been central to socialist economic thought for a century and a half, suddenly fell out of favor even among socialists.

The three essays which follow are in essence critiques of this new orthodoxy. The topic of the first essay is market socialism, with a focus on the most prominent market socialist proposals that have been made in recent decades. Rather than launching into a discussion of the feasibility or possible economic performance of the various market socialist proposals, the essay instead asks whether market socialism is substantially different from capitalism in the first place. It aims to show that, in any economic system which is based on market relations and atomized ownership of the means of production, there will be *de facto* capitalist exploitation. Thus, apart from any negative economic outcomes that it may produce, market socialism is undesirable *in principle*, because it is not substantially different from capitalism - and if our goal is merely to achieve better outcomes within capitalism, there are far less costly ways of doing this than trying to redesign the economy.

The second essay identifies a dilemma that may be present in all models of socialism which feature a planned economy (democratic or not). While critiques of economic planning are often couched in the language of "efficiency", the main difficulty actually faced by historical planned economies in their competition with capitalism was the

fact that they could not keep pace with capitalist technological change after a certain point in their history. The centralized, top-down Soviet model of economic planning gave enterprise managers incentives to be technologically conservative and to avoid taking the risks associated with innovation. However, decision makers in a democratically planned economy may well face similar incentives, because innovation disrupts the lives of workers by rendering old jobs obsolete, so there is likely to be democratic pressure on workplaces to act in a technologically conservative manner. In general, there is a natural tradeoff between job stability and innovation, which places all types of socialism in a dilemma as long as they must compete with rival capitalist societies. Capitalism pursues innovation without regard for its effects on jobs and workers. How can socialism keep up the same rate of innovation without sacrificing job stability? The essay provides a few potential solutions.

The third essay aims to challenge the notion that socialist economic planning "failed" in the Soviet Union and East-Central Europe. It is an empirical study of the economic performance of the Soviet-type socialist economies during their worst-performing decade (the 1980s) compared with the experiences of the same countries after the transition to capitalism. The commonly held view is that Soviet-type economic planning was fundamentally inferior to capitalist market economies, and that the transition to capitalism in the former USSR and East-Central Europe brought net economic benefits in the end, in spite of high initial costs. However, what emerges from the data is that the high economic and social costs of transition were in many cases greater than the benefits.

The region as a whole suffered a major economic downturn coupled with increased inequality and unemployment, only to return to roughly the same growth path it was on before the transition. However, there is considerable variation between countries. Some economies performed better under socialism, others under capitalism, and there are even a few cases where the transition does not appear to have made a difference either way (at least in terms of GDP per capita). Thus, overall, we may conclude that the historical economic performance of planned economies, in their most unfavorable decade, is not systematically inferior to the performance of comparable market economies. This provides a reason to be hopeful about the potential of future planned economies, operating on a different and better model.

CHAPTER 1

EXPLOITATION UNDER MARKET SOCIALISM

1.1 Introduction

The idea of a happy marriage between socialist ideals and a market economy has existed for a long time. However, at least from the mid-19th century until recently, the majority of socialists were clearly advocates of economic planning of various kinds. Indeed, the link between socialism and a planned economy was so strong that the two terms were sometimes even considered synonymous. But in recent decades, with the fall of the Soviet-type economies and the ascendancy of neoliberalism, market socialist ideas have come to rival the ideas of socialist economic planning. As such, if we are to effectively evaluate proposals for a socialist alternative to capitalism, it is now more important than ever to study market socialist proposals with a critical eye and inquire whether they are useful visions for the organization of a future socialist society. It can no longer be taken for granted that critics of capitalism support an economic system based on economic planning. On the contrary, today we can almost take it for granted that even critics of capitalism are willing to concede the necessity of preserving some type of market economy. But is this concession necessary? Market socialist proposals have been debated and criticized from many different perspectives, with critics on the right generally arguing that the market

cannot bring its alleged benefits in a socialist economy, and critics on the left generally focusing on pervasive market failures, long-term instability, and the danger of a return to capitalism. But another type of criticism can also be made, drawing upon one of the original impulses that gave rise to the socialist project in the first place: the desire to create a society free of economic exploitation. This essay contends that market socialism - and indeed any type of economic system based upon market allocation of the factors of production - cannot be free of exploitation. It further argues that if one abandons the goal of building a society free of exploitation, then there is little reason to support any kind of socialism at all, as practically all of the positive aspects of market socialism could also be achieved by a capitalist system with a significant degree of redistribution and state regulation of market activity.

1.2 Models of market socialism

The forms of market socialism that we have chosen to discuss are those put forward by John Roemer (1994, 1996a), Alec Nove (1983), Włodzimierz Brus (1972) and Ota Šik (1967). There is a special focus on Roemer, as he is the market socialist author who most directly addresses the question of exploitation. Together, these proposals are representative of the kinds of economic models advocated by market socialists today. Notably absent is a discussion of Oskar Lange's Walrasian idea of socialism. That model is often cited as the earliest proposal for "market socialism," but this is a misnomer. Lange's model is not a type of market-driven socialism, but a planned economy in which the planners deliberately set out to mimic perfectly competitive market outcomes by having firms set their prices

equal to marginal costs. It was meant as a rebuttal of Hayek's contention that socialist planners would not be able to rationally determine prices. Not only can they rationally determine prices, argues Lange, but in fact they could even decide to mimic market prices if we were to concede that market prices are in some sense "correct". However, the firms in Lange's model do not attempt to make a profit and do not actually engage in competition. They simply follow two rules: 1) for any output, use the combination of inputs for which the ratio of marginal product to price of all inputs is equal; and 2) choose the output for which marginal cost equals price. Meanwhile, investment is allocated by the state. (Lange, Lippincott, and Taylor 1938) For these reasons, Lange's model is very different from anything that would be called "market socialism" today.

1.2.1 Nove's "feasible socialism"

Alec Nove, in *The Economics of Feasible Socialism* (1983), proposes a model of market socialism that incorporates many ideas from other authors who have written on the subject (including Brus and Šik, discussed later in this essay). The result is an extremely flexible market socialist project, in the sense that Nove's "feasible socialism" does not aim to decide in advance exactly how much the state will do and how much will be left to the market. Instead, the boundary between plan and market can be shifted by policy changes within the system at any time. There are five types of enterprises in Nove's socialism, and each type employs a certain proportion of the workforce and uses a certain part of society's capital assets. By expanding the domain of one enterprise type at the expense of another,

Nove's model can approximate anything from near-Soviet-style planning to near-capitalism.

First, there are state-owned enterprises, integrated into a comprehensive national plan and controlled by a central planning agency. These form the planned sector of the economy, and Nove envisions this sector as consisting mainly of heavy industry, resource extraction, infrastructure, and other industries that exhibit great economies of scale and lend themselves quite well to bureaucratic planning. (Nove 1983: 201) Second, there are the so-called "socially owned" enterprises, which are firms owned by the state but controlled by their workers (or rather, controlled by managers elected by the workers). These can be contrasted with the third type of enterprises, which are fully worker-owned co-ops. Both types are controlled by their workers in their day-to-day operations. But in the socially owned enterprises the workers serve as agents of the state, and the state appropriates the profits and decides how they shall be used. In the co-ops, profits are appropriated by the employee-owners. (Nove 1983: 206) Nove argues that the socially owned and co-op sectors should cover the sectors of the economy that call for middle-sized enterprises. Finally, the last two categories consist of privately owned enterprises (essentially identical to capitalist firms) and self-employed individuals working independently. Nove believes that private ownership is most appropriate for small and very small enterprises, but he argues that if anyone is able to set up a small business and operate it profitably, he should be allowed to do so. The only rule is that private owners must also be workers in their own firms. Nove claims that this is enough to ensure the absence of

exploitation, as the owners' income would be derived from labor and not property. (Nove 1983: 207) All of the various types of enterprises would sell their products on the market. All of them except the state-owned enterprises would also buy all their inputs on the market and use profit maximization as their goal. However, major investments would always be consciously planned by a central authority.

There are other important features of Nove's model, and he goes into considerable detail, but the essential aspects have been outlined above. What Nove proposes is an economic system where all possible types of enterprises (including capitalist ones) may co-exist, subject to a few simple limitations to ensure that the state-owned and employee-owned sectors remain dominant. As noted before, Nove's proposal is in principle compatible with an economy that is dominated by the state-owned and planned sector, since he does not put a strict limit on how much of the economy can be covered by enterprises of the first type. But that is clearly not the spirit of his proposal. He clearly imagines most economic activity being performed by the "socially owned" and employee owned sectors.

1.2.2 Brus and Šik, the socialist market reformers

Włodzimierz Brus and Ota Šik were prominent market socialist authors writing in Eastern Europe during the Cold War. Unlike Nove and Roemer, their project was not to invent a blueprint for market socialism from scratch, but rather to advocate market-oriented reforms within the framework of the Soviet-type economies in their home countries

(Poland and Czechoslovakia). Thus, the proposals of Brus and Šik are much more concrete and policy-oriented, dealing with issues that were important at the time of writing instead of timeless abstractions. On the other hand, for the same reasons, Brus and Šik do not go into much detail about how precisely their ideal society would be organized. It is often hard to tell the difference between what they consider to be objectively best and what they consider to be the most realistic option that could be pursued at the time.

Brus envisions an economic system that combines a Soviet-type central planning agency with extensive autonomy and profit-maximizing behavior for individual firms. The central planning agency would have fewer functions than in the Soviet model. It would be responsible for creating national economic plans, but these plans would be less detailed than in the Soviet model, and in particular they would refrain from specifying output quantities for most goods. They would instead focus on such aggregates as the macroeconomic rate of growth, the proportion of national income that should be dedicated to investment, and the precise nature of this investment. Brus emphasizes that the central planning agency, not individual firms, would make most investment decisions and control foreign trade. That agency would also determine “the basic outline of the earnings structure for wage and salary earners,” and issue directives for the production of specific quantities of goods in a few special cases. (Brus 1972: 139)

Meanwhile, all other economic decisions would be left to the managers of individual firms. Most importantly, prices would not be set by the central plan like in the Soviet model. Instead, each firm would be free to determine the price of its outputs and to

negotiate contracts with its suppliers. There would also be some firm autonomy in setting wages, although Brus does not specify how much. A firm would be able to use some part of its profits for investment, if it so desires, separate from the central investment fund allocated by the planning authority. However, individuals may not set up new firms (only the planning agency may do that), and one firm may not invest in another. Naturally, firm managers would also have the power to decide on the internal organization and production processes of their enterprises. The guiding principle of all firm activity would be profit maximization. (Brus 1972: 140-141)

Šik's vision of market socialism is largely similar to that of Brus, but with some important differences. Like Brus, Šik takes the traditional Soviet model as his starting point and advocates incremental reforms. Thus, Šik's model also includes a central planning agency. However, he supports a greater role for the market than Brus. Šik proposes that all firms, even the larger ones, should operate according to market principles and have the ability to set their own prices and make purchases as they see fit. At the same time, the capital assets of the large firms (and some part of the capital assets of the mid-sized firms) would be the property of a publicly owned fund. The remainder of the capital assets of mid-sized firms would be owned privately by their employees. Small firms would be worker co-ops, and some particularly tiny ones may even be privately owned by individuals. The main roles of the central planning agency would be to control investment and foreign trade, and also to decide how firm profits are to be used (what proportion is to be used by the owners—state or private—as they see fit, what proportion to be used for investment, and

what proportion to be used for social consumption). One peculiar feature of Šik's model is that firms would be mandated to engage in "profit optimization" rather than profit maximization. What Šik appears to mean by this phrase is that the central planning agency may set goals that firms are required to meet, for example social goals such as requiring a construction company to build a certain type of houses.

1.2.3 Roemer's market socialism

John Roemer's concept of market socialism, as laid out in *A Future for Socialism, Egalitarian Perspectives* and elsewhere, has been perhaps the most influential market socialist vision in the post-Cold War world. It is a vision that Roemer describes and defends in great detail, while also admitting that it is an economic model quite close to capitalism, sharing most of the features of a capitalist market economy. Production would be carried out by independent, profit-maximizing firms structured in much the same way as capitalist firms. There would be a labor market, and wages would be determined by that market. Furthermore, although Roemer does allow for the existence of a public sector, "almost all private goods and services will be allocated on markets, and prices will be determined in these markets." (Roemer 1996a: 291)

In the end, as Roemer himself points out, his proposal for market socialism only differs from capitalism in two respects. First, he envisions government control of investment through the setting of different interest rates for different industries or sectors. These interest rates would be controlled by the state bank or banks, although private banks

would also be permitted to exist (at least as part of industrial groups similar to the Japanese *keiretsu*). Second, Roemer's model features public ownership of firms, so that the part of firm profits that is currently used for the luxury consumption of the capitalists would instead be redistributed to the workers as a social dividend. Roemer argues that the social dividend should be equally distributed to all people, so as to realize the egalitarian aspirations of socialism. But he admits that non-egalitarian distributions are also possible. (Roemer 1996a: 292) Since the people are technically the collective owners of all firms in this economy, managers are responsible to them. But in Roemer's view, this responsibility consists of little more than making profit-maximizing decisions. As long as the managers are each striving to maximize profit, they are doing their duty to the people, and no direct control over them is necessary. Thus, public ownership does **not** mean public control or workers' democracy.

In this model, citizens would receive income from three sources: wages, interest from savings, and the aforementioned social dividend. Since wages would be set by the market in the same way as under capitalism, and since savings would also be accumulated in the same way, Roemer himself admits that "substantial inequality will continue to exist in this society." But he also claims that the final income distribution will be "far more equal than in most, if not all, capitalist societies," due to the equal social dividend that all people get from corporate profits. (Roemer 1996a: 293) This type of market socialism would therefore be more egalitarian than capitalism, but probably not *much* more egalitarian.

Roemer devotes considerable space to discussing the issue of investment and managerial discipline under market socialism, to answer the objection that a stock market (and therefore private ownership) would be needed to ensure efficient management of firms by creating a group of shareholders who have a direct financial interest in firing incompetent managers. He points to the example of post-war Japanese capitalism and its *keiretsu*, as a model of a market economy where investment is not usually directed by a stock market and managers are not routinely hired and fired by boards representing shareholders, and yet firms are managed efficiently. (Roemer 1996a: 295) This argument may be intended to assuage the concerns of capitalist critics of his model, who would object to any deviation from contemporary capitalism, no matter how minor.

1.3 The idea of exploitation and the purpose of socialism

After surveying recent proposals for market socialism, we must now take a step back and ask a fundamental question: What is, after all, the purpose of socialism? The market socialist authors are concerned with defending socialism—or a certain version of socialism—against the criticism that it would be inefficient, insufficiently innovative, or otherwise inferior to market-driven capitalism. They do this by proposing models of socialism that would incorporate the main virtues of capitalism. But if we are to reinvent socialism by incorporating capitalist elements, the question arises: Why advocate an economic system that is different from capitalism in the first place? What do socialists hope to achieve through socialism?

1.3.1 The meaning and purpose of socialism

It is difficult to pinpoint the precise historical origins of the concept of socialism, but in its modern form it is generally understood to have begun with the early 19th century social reformers that were retroactively named "utopian socialists". Thinkers such as Henri de Saint-Simon, Robert Owen and Charles Fourier envisioned various types of ideal societies, generally characterized by equality, solidarity, non-violence, and a lack of social conflict. Later, with the development of Marxism, the concept of socialism came to be associated with the idea of a victorious class struggle waged by the proletariat against the bourgeoisie. In the Marxian sense of the word, socialism is a type of society that arises out of the contradictions of capitalism and that abolishes private property over the means of production and class exploitation. This class-based vision was so successful that, by the early 20th century, the word "socialism" was associated almost exclusively with the idea of a militant working class movement seeking to overthrow the bourgeoisie. In the wake of the First World War, this movement split in two opposing camps: social democracy and Marxism-Leninism. At first, they both continued to regard socialism primarily in terms of class struggle, although they differed over the question of which tactics and strategies were appropriate in carrying out this struggle. But over time, social democracy—which advocated the strategy of gradual reforms within a liberal democratic framework—abandoned the ideas of class struggle, of removing the bourgeoisie from power, and of replacing capitalism with a fundamentally different economic system. By the 21st century, social democracy came to be identified with support for the welfare state, redistributive

economic policies, free provision of social services, and a general attempt to make capitalism more egalitarian without changing the ownership of the means of production. Meanwhile, the various schools of thought inspired by orthodox Marxism or Marxism-Leninism continue to advocate the replacement of capitalism with a different economic system. They do not agree on the features of this system but they all tend to call it "socialism".

It would be futile to attempt to determine which of the many different visions of socialism constitutes "true" socialism. However, there is a clear division between those self-described socialists who see "socialism" as a complete economic system that would replace capitalism, and those self-described socialists who think only in terms of policy improvements and not systemic change. For the purpose of this essay, the idea of an alternative economic system will be called "socialism" and the idea of policy improvements within a capitalist framework will be called "social democracy". Therefore, when we ask what is the purpose of socialism, we are asking what is the purpose of replacing capitalism with an alternative economic system.

Historically, Marxism criticized capitalism for being an economic system based on class exploitation, in which the owners of the means of production (the capitalists, the bourgeoisie) extract surplus value from those who produce it (the working class, the proletariat). This concept of exploitation is both a fundamental element of the Marxian analysis of capitalism, and the chief moral reason why Marxists advocate socialism. In the Marxian view, the main purpose of socialism is to abolish the "exploitation of man by

man,” the state of affairs in which a ruling class obtains unearned income (in the form of profit, interest and rent) from the labor of an exploited class. But socialism is also supposed to accomplish other goals as well: to remove barriers to the further development of the forces of production (i.e. to ensure further technological progress), to provide for the basic material needs of all people in society, to guarantee a higher degree of economic and social equality than under capitalism, to eliminate unemployment and business cycles, and to remove imperialism and major wars from the world stage by eliminating the reasons for their existence. More recently, the idea of enabling human society to develop without destroying the Earth’s environment could also be widely considered as a goal of socialism.

These goals are very ambitious, especially when considered together. Some of them, such as the abolition of exploitation in the Marxist sense or the end of business cycles, obviously cannot be achieved under capitalism. Others may be achieved under capitalism on their own (for example, technological progress), but not when combined with the others (for example, it is hard to imagine a capitalist society achieving technological progress while at the same time having abolished unemployment). A movement pursuing *all* of these goals must necessarily be socialist rather than social democratic. That is to say, it must seek to replace capitalism rather than reform it.

On the other hand, if we have a movement pursuing only some of those goals and not others, that movement may not need to be socialist. Suppose, for example, that we were only concerned with the goal of providing for the basic material needs of all people in society: food, clean water, clothing, shelter, health care and education. Could this be

achieved under a system that is basically capitalist? Both history and an understanding of capitalism show that this is possible. A straightforward welfare state could accomplish this goal. It would be a more extensive welfare state than most of those currently in existence, but, other than requiring high taxes, it need not interfere with capitalism at all. If someone proposed replacing capitalism with another economic system for the sole purpose of providing for people's basic needs, such a proposal would be rightly regarded as unnecessary. There is no need to take the radical step of replacing capitalism in order to achieve a goal that can be accomplished through social democratic policies.

The same holds true for any other proposal with limited or modest goals. And the market socialists tend to have precisely such modest goals. John Roemer, for example, defines the goals of his version of socialism purely in terms of maximizing equality of opportunity in three major areas: self-realization and welfare, political influence, and social status. (Roemer 1994: 11) The second area—political influence—is explicitly identified with political democracy. The other areas have to do with economic equality, provision of basic necessities, and opportunities to engage in meaningful work. All of these can be provided by a social democratic state under capitalism. It is therefore not clear why Roemer believes it would be worthwhile to reorganize society along market socialist lines, when the goals of his market socialism could be just as easily achieved through a robust welfare state.

The criticism of market socialism in this essay fundamentally hinges on this type of argument: If the goals or outcomes of a certain model of socialism are no different from

what can be achieved with a robust capitalist welfare state, then why bother with this kind of socialism at all? To restructure an entire society's economic system is a complicated, risky, and very costly process. It can only be justified if the expected benefits are very great and cannot be obtained any other way. In other words, the pursuit of socialism can only be justified if socialism achieves some desirable goals that absolutely cannot be met under any kind of capitalism. Only ambitious socialism is worth pursuing.

More specifically, we focus on the traditional socialist goal of abolishing exploitation, because this was historically the central promise of socialism and it is a goal that absolutely cannot be met under any kind of capitalism. We argue that abolition of exploitation also cannot be achieved under market socialism.

1.3.2 The importance of exploitation

Historically, the fundamental socialist criticism of capitalism is not that it is unequal or that it fails to provide a certain standard of living, but rather that it exploits the majority of people (the working class). This is the greatest Marxian contribution to the socialist tradition, and it is the central issue that separates socialists from liberal and progressive advocates of a reformed capitalism. The exploitation argument holds that capitalism is fundamentally and inevitably unjust. Thus, socialism is necessary because capitalism requires exploitation and exploitation is immoral. In addition, exploitation plays a major role in creating the conditions for many of the other negative features of capitalism, such as

the irrational accumulation drive, overwork and harsh working conditions, destruction of the environment, and imperial rivalries.

Some of the other goals of socialism, listed in the preceding section, may not require the abolition of capitalism in order to be accomplished. It is primarily the issue of exploitation that motivates socialists to be anti-capitalists in principle. As such, it is telling that the market socialists do not usually consider exploitation to be a major concern (or, sometimes, any concern at all). John Roemer goes so far as to claim that socialists were wrong to focus on exploitation in the first place. He argues that to condemn capitalism for its exploitation is to say that people deserve what they produce (and no more or less than that), and then reasons that socialists cannot support such a view because socialists advocate extensive social assistance for many people who are not direct producers (the elderly, the sick, stay-at-home parents, and so on). (Roemer 1994: 16)

This argument grossly misrepresents the traditional socialist position. It has never been the contention of any group of socialists that each individual should receive precisely the wealth that he or she produces, and that children or the elderly or other non-workers should therefore get nothing at all. It has always been understood that some form of direct or indirect “taxation” would have to occur, so that workers are compensated based on their labor but not at a 100% rate. A certain percentage of the wealth produced by society would go into a common pool, which would be used to support the welfare state, other collective projects (including collective consumption), and of course to provide a source of investment.

A critic may ask: How, then, is this different from exploitation? The key difference is that under socialism the surplus is not appropriated by one class from another as is the case under capitalism. Rather, the surplus is appropriated by a public entity, not a minority class, with the amount of surplus and its uses decided by the population. A child or an elderly relative or a hospital patient do not exploit the workers who support them (and who decided precisely to what extent to support them). It is not the same thing to say that society should pay for cancer treatment, as to say that society should allow the existence of landowners who can charge rent. Exploitation is a situation where a powerful party extracts some form of wealth from a weaker party, not any situation where someone receives less wealth than he or she created.

Roemer argues that socialism should be based on egalitarian theories of justice rather than on the desire to combat exploitation. (Roemer 1994: 17) And it is certainly true that the egalitarian impulse has been an important part of every historical socialist movement. You cannot have socialism without egalitarianism. But it is difficult to see how a convincing socialist argument could ever be based on egalitarianism *alone*. Scandinavian social democracies have been among the most egalitarian societies in recorded history, rivaling and even surpassing Soviet-type societies in terms of income equality (though not equality of wealth). Someone who is solely concerned with equality combined with a high standard of living should logically support the Scandinavian model of capitalism, rather than any proposal to replace capitalism with socialism. After all, social democracy appears to be just as egalitarian as socialism, and it is far easier to achieve. Roemer himself

acknowledges social democracy as being just as good as market socialism at achieving the limited goals he advocates, (Roemer 1994: 54) but believes that the Scandinavian model is contingent on special historical circumstances and would be difficult to reproduce elsewhere. This may be so, but market socialism requires a complete restructuring of capital ownership and large-scale expropriation in order to get started (at least expropriation of financial assets, if nothing else). However contingent Scandinavian social democracy may be, it is surely easier to achieve than getting the vast majority of shareholders in a capitalist society to give up their stock.

Therefore, an argument for socialism (as opposed to social democracy) cannot rely on the egalitarian impulse alone. It must rely on a more fundamental critique of capitalism as necessarily unjust, such as the one associated with the concept of exploitation. Without a notion of exploitation and the desire to remove exploitation from society, it is hard to see how one could justify a radical change of economic system as opposed to mere adjustments of policy within capitalism. It is therefore important to see what the various market socialist authors have to say about exploitation.

1.3.3 Views of exploitation among market socialists

Nove's treatment of exploitation is not persuasive. His claim that small business owners do not exploit their employees as long as they work alongside them is false, no matter what definition of exploitation we adopt. According to Marxist theory, small business owners derive *some* of their income from their own labor, but they also get some

income from exploitation. There is no rigorous theory of exploitation that would allow us to say that anyone who performs any labor is definitely not exploiting anyone else. Thus, Nove's model certainly involves some degree of exploitation. But perhaps this is not so bad, as long as it remains a marginal phenomenon. After all, Nove might argue, we should not expect perfection. This is true, except that exploitation can also occur in the employee-owned sector of the economy (see section 4.2). So, far from being a fringe phenomenon, exploitation may be a major feature of Nove's proposed system.

The Brus-Šik model, being a reformed version of the Soviet system, shares some of its main features with regard to exploitation. The means of production are owned collectively by the whole people (at least nominally), and there is a central planning agency that controls investment and foreign trade, creates new enterprises, directly and fully plans the production of a few particularly important goods, and sets wages (or at least sets the upper and lower boundaries for firm-determined wages). So far, whether or not there is exploitation depends entirely on one's opinion about exploitation in Soviet-type societies—a debate that cannot be summarized here. But this is not the whole story. Most firms are controlled by managers with extensive autonomy. They decide how to use the firm's profits (or net income), they set aside a fund for capital replacement, and they can influence the wage rates paid by the firm. In addition, of course, they control the labor process inside the firm. Thus, overall, these managers certainly have the potential to be exploitative. They could unofficially extract surplus value by raising their own salaries and lowering workers' wages. Perhaps if the workers elected their own managers and if those managers made

decisions through collective and democratic means, we could say there was no exploitation. But even that is doubtful, as explained in section 4.2.

Unlike the other market socialist authors, John Roemer delved deeply into the question of exploitation, and provided his own rigorous definition of the concept. In *Property Relations vs. Surplus Value in Marxian Exploitation* (1982), Roemer presents his property relations approach to exploitation, which he claims to be superior to the classical Marxian surplus value approach (that relies on the labor theory of value). Roemer engages in this exercise of creating a new definition of exploitation largely in order to show that the concept does not have to rely on the labor theory of value, but for the purpose of this essay we will use his concept of exploitation to evaluate his proposal for market socialism.

Roemer begins the presentation of his theory of exploitation with a brief critique of the traditional Marxist approach on this matter. He correctly identifies the traditional Marxist definition of exploitation as one based on the expropriation of surplus labor, and explains this definition as follows: “If A is an exploited agent, then another agent B is said to exploit A if the surplus labor performed by A is embodied in goods which B appropriates.” (Roemer 1982: 281) He then claims that property relations (specifically, private ownership of the means of production) are the cause of exploitation even in the traditional framework, and he states his intention to provide a theory of exploitation based solely on these property relations, without reference to the labor theory of value. It is apparent that Roemer’s creation of a new theory of exploitation stems from a desire to

show that capitalism is an exploitative system while accepting the neoclassical view of value.

Very early on, Roemer explains that his view of exploitation is based on comparing the outcomes achieved by various groups of people in the present system with the outcomes they would achieve under some alternative arrangement. The alternative arrangement is taken as the standard or benchmark for non-exploitation. Intuitively, to be exploited means to be put in a situation where you are worse off than you would be under the non-exploitative standard. (Roemer 1982: 285) Notice that this makes no reference to any theory of value or to any questions about production. While the traditional Marxist definition sees exploitation as a matter of taking something away from people who rightfully deserve to keep it (e.g. taking away surplus value from those who produce it), Roemer's definition sees exploitation as a matter of wealth distribution. Formally, Roemer identifies a social group or "coalition" as being exploited if (a) they would be better off in an arrangement where they withdrew from society with a proportional share of society's alienable property, (b) such an action would leave the other members of society worse off, and (c) those other members of society would be worse off even if the exploited coalition withdrew and took away only the property it *currently* owns. (Roemer 1982: 285) In other words, exploitation is what occurs when one group is worse off than it would be in a "fair" society, another group is better off than it would be in that fair society, and the latter group's privileged status depends on keeping the former group inside the currently existing society.

Roemer claims that his definition of exploitation will sometimes lead to the same conclusions as the traditional definition, and when the two definitions lead to different conclusions then his definition yields the more intuitive result. He attempts to show this by constructing a series of hypothetical social arrangements and investigating whether exploitation occurs according to each of the two definitions. Most of his examples are based on a scenario of simple reproduction where only a single good is produced (corn), producers have a choice between farm technology and factory technology, and the latter is more efficient but requires the consumption of capital stock. (Roemer 1982: 287) There is not enough capital stock to allow all production to be carried out using the factory technology, and since we are dealing with simple reproduction there will *never* be enough capital stock for it. In these hypothetical scenarios, the capital stock (“seed corn”) represents the alienable property whose ownership is relevant for Roemer’s definition of exploitation.

The first scenario is the basic non-exploitative standard. The capital stock is distributed equally to all members of society. Each person produces as much corn as possible in the factory and the rest on the farm. Exploitation clearly does not occur, by any definition.

The second scenario is more intriguing. Capital stock is still distributed in a perfectly egalitarian fashion, but there is division of labor such that some members of society (the employers) use their capital to hire others to work for them. The employers extract a surplus from the workers they hire, and get the rest of the corn they need by

farming. The workers get exactly the same amount of corn as the employers, but they work exclusively in factories and therefore produce more than they get. Both groups perform the same amount of work, however. Roemer claims that this arrangement would be called exploitative under the traditional Marxist definition, since a surplus is being extracted, but argues that such a conclusion is nonsensical as long as all people do the same amount of work and get the same rewards. (Roemer 1982: 289) Under Roemer's property relations definition, the arrangement is non-exploitative.

The third scenario is essentially a capitalist arrangement, featuring a very small number of capitalists (who own all the capital stock), and the majority of the population divided between workers (employed in factories) and peasants (producing corn on their farms). Both definitions of exploitation agree that the workers are exploited and the peasants are not. However, the peasants form a reserve army whose existence may be necessary to reduce the bargaining power of the workers and thus ensure their continued exploitation. (Roemer 1982: 292) Also, Roemer uses the situation of the peasants in this scenario to define something that he calls "unfair treatment," which differs from exploitation in that one group is privileged and another is impoverished, but the withdrawal of the latter from society would not hurt the former.

The fourth and fifth scenarios go together, and are meant to illustrate a point. In both scenarios there is a "rich island" and a "poor island." Each island receives precisely the same payoff in both scenarios. But in the fourth scenario the two islands do not interact, while in the fifth scenario the rich islanders employ the poor islanders. Thus, under the

traditional Marxist definition, the poor islanders are exploited in the fifth scenario but not in the fourth. However, under Roemer's definition, neither scenario is exploitative.

(Roemer 1982: 294) He uses this as an argument for the superiority of his definition, since he considers it intuitive that two scenarios yielding the same wealth distribution starting from the same initial conditions must both contain the same degree of exploitation (or lack thereof).

The sixth scenario is similar to the third one (typical capitalism), but introduces an element of bargaining. The capitalists are still very privileged and hold all the capital stock, but the workers, for whatever reason, are strong enough to be able to bargain for a working day that is just slightly shorter than the working day they would face under the perfectly egalitarian scenario. This means they are **not** exploited according to Roemer's definition, although they would be exploited under the traditional Marxist view. The peasants are the only group who fares worse in this scenario compared to perfect egalitarianism. Roemer uses this example to make a point about labor aristocracy. He claims that if the workers in advanced capitalist countries are in fact better off than they would be under a worldwide egalitarian distribution of property, then classical Marxism is mistaken to consider them exploited. (Roemer 1982: 295)

Roemer presents other scenarios as well, but they are intended to illustrate the finer points of his theory by removing some of the simplifying assumptions, so they are not essential for the purpose of understanding his basic framework.

1.4 Is market socialism exploitative?

Having reviewed Roemer's theory of exploitation, we may now turn to the question of whether market socialism is exploitative. Naturally, this requires us to first define our terms. Which theory of exploitation are we employing, and which model of market socialism is being considered? We may begin with Roemer's model of market socialism.

1.4.1 Exploitation under Roemer's market socialism

As noted before, Roemer's market socialism is very similar to capitalism, with only two key differences: state control of investment and public ownership of the great majority of firms (although these would be privately managed and seek to maximize profits). It is the second difference that is relevant for the issue of exploitation. In the classical Marxian view, capitalism is exploitative because it contains a class of private owners of means of production who are able to extract surplus value from the working class and then realize this surplus value as profits, using those profits however they wish. Now, in Roemer's model, such a class is not supposed to exist. The means of production are the property of the people, held in trust by the state, and the profits that are not reinvested are given to the citizen-owners as a social dividend.

But appearances can be deceiving. Roemer's model of market socialism would still include company managers that are expected to act in precisely the same way as managers under capitalism—that is to say, they would seek to maximize profits—except that the state would seize all profits that are not re-invested, to distribute them as the social dividend.

The company managers would also have full control over hiring and firing and over wage policy, just as in capitalist firms. Given all this, the picture that emerges is of a system where the managers are *de facto* owners of companies, who simply have to pay a one hundred percent tax on non-reinvested profits. And since they have full control over wage policy, they would find it very easy to hide profits by inflating certain wages—their own, or those of their associates—thus leaving little or nothing to be taxed by the state. The fact that Roemer did not envision this outcome is most likely due to the fact that his theory does not take into account power relationships, and therefore ignores the enormous power that managers would have over companies if they are given a free hand to hire, fire, and set wages.

So Roemer's model of market socialism is in fact equivalent to capitalism with a peculiar tax structure, and would likely result in profits being hidden as inflated administrative wages. As such, it is easy to see that this economic system would still be exploitative in the classical Marxian sense, and furthermore it would specifically feature *capitalist* exploitation. Workers would sell their labor-power on a labor market, just as in capitalism. They would be paid wages according to the value of their labor-power, just as in capitalism. Surplus value would be appropriated by profit-maximizing companies that are privately owned in all but name, and some portion of this surplus value would be distributed to the *de facto* owners in the legal form of administrative wages. This is simply capitalism, beneath a very thin veil of legal fiction.

Would it still be an exploitative system according to Roemer's own definition of exploitation, however? Let us recall that definition. A social coalition is being exploited if (a) they would be better off in an arrangement where they withdrew from society with a proportional share of society's alienable property, (b) such an action would leave the other members of society worse off, and (c) those other members of society would be worse off even if the exploited coalition withdrew and took away only the property it *currently* owns. Leaving aside market socialism for a moment, let us imagine a generic society with an unspecified economic system, where significant inequality of income exists, and most people are employed as workers in companies managed by others (the ownership structure does not need to be specified). Let us consider a group of workers that possess a certain specific skill which requires some degree of training or experience, but who are nevertheless near the bottom of the income distribution. For example, adjunct professors, assuming they have the same wages as in contemporary capitalist society. Are they exploited, according to the Roemer definition? Yes, they are. First, because they are in the lower part of a significantly unequal income distribution, they would be better off in an arrangement where they withdrew from society with a proportional share of society's alienable property. Second, because they would be taking with them significantly more wealth than they currently own, such an action would leave the other members of society worse off. And third, because the members of the coalition—the adjunct professors—possess specific skills that require years of training, the rest of society would be worse off even if the coalition withdrew and took away only the property it currently owns, because it would be necessary to invest significant resources into training their replacements.

Thus, any society that features an unequal distribution of income with certain groups of skilled workers receiving below-average income is an exploitative society according to Roemer's definition. And all historical market economies meet these criteria. Roemer's model of market socialism, which explicitly aims to set wages in precisely the same way as capitalism, would also meet these criteria. In order for a society to be non-exploitative, a highly egalitarian distribution of income is *required*, at least among all groups of skilled workers. Such a distribution could only be guaranteed by some form of economic planning.

1.4.2 Exploitation in a system of worker-owned firms

In addition to Roemer's model, it is also necessary to consider the issue of worker-owned firms, which is the dominant economic arrangement in Alec Nove's vision of market socialism and which plays a significant role in many other concepts of market socialism, both historical and contemporary. Employee ownership is often presented as a socialist alternative to state ownership. Many socialists view employee ownership as a way to eliminate the exploitation associated with private ownership without having to suffer from the over-centralization and bureaucratic rigidity that they believe to be the inevitable result of state ownership. The popularity of these ideas has also resulted in much academic study of worker-owned firms (see for example Hansmann 1988).

Worker-owned firms have many advantages. They put workers in control of the production process. They can achieve a much more egalitarian income distribution than

capitalist firms. Their profits are controlled—and either consumed or reinvested—by the workers themselves, without the intervention of a capitalist owner. This is all well and good, and any growth of worker-owned firms under capitalism would have benefits, but employee ownership within the context of a market economy cannot eliminate the possibility of capitalist exploitation. Employee ownership can only ensure that exploitation cannot occur *within the firm*. Some Marxists, focusing on the idea that exploitation happens in the process of production, may take it for granted that the process of production is contained within a single firm and therefore exploitation must also be contained within a single firm. But this is incorrect. One single production process may easily involve two or more firms. For this reason, lack of exploitation within the firm does not necessarily mean lack of exploitation in the process of production.

Let us consider the following scenario: in our market socialist economy composed of co-ops, we have two firms, A and B. They are each owned by their respective employees. Firm A has recently purchased an oil refinery, and some of its members (i.e. worker-owners) have the knowledge to serve as managers of the refinery. But none of its members have the skills or the desire to go work there. Firm B, on the other hand, has plenty of members eager to do any work they can find, and some of them have the skills to work in an oil refinery. However, firm B is close to bankruptcy and its members are relatively poor (hence their willingness to do any work). If they cannot find a new source of income soon, firm B will have to be liquidated and its members will become unemployed. In this climate, firm A approaches firm B with a proposal: they will “collaborate” in using

the oil refinery. Firm A will provide the refinery itself, as well as the management staff. Firm B will provide all of the workers. All things produced by the refinery will be the property of firm A, who will sell them for a profit. In exchange, firm B will receive a steady and fixed stream of income from firm A.

In the scenario I have just described, the workers of firm B find themselves in exactly the same situation they would face under capitalism. They do not own the means of production (the refinery). They must work to produce commodities for someone else (firm A), and that “someone else” will sell those commodities and make a profit. The workers themselves will get paid a wage, and—given standard market economy assumptions—this wage will represent only the value of *labor-power*, not the full value they created. Thus the workers will be producing surplus value for their exploiter. This may be called exploitation through subcontracting. One co-op, which owns means of production, is able to treat another co-op in precisely the same way a capitalist would treat a worker. Market socialism based on worker ownership allows exploitation to occur, and in a way similar to capitalist exploitation. One could even imagine a co-op that derives its entire income from exploiting others. This could happen, for example, if a co-op purchases a large amount of land and then focuses exclusively on being a landlord, getting all of its income in the form of rent.

At this point, an objection may be raised: Couldn't the state, through legislation, make such exploitative relationships illegal? In theory it could, but only by significantly curtailing freedom of contract, in a way that would greatly skew the very market prices that are supposed to be the virtue of market socialism. Take, for example, the case of the co-op

that buys land for the purpose of charging rent. The state could pass legislation making it illegal for co-ops to charge rent for the use of their land. But that would cause the price of many pieces of land to drop significantly, as they are suddenly less attractive to prospective buyers. In other words, the price of land under market socialism would no longer be set by the same mechanism as under capitalism. Or take the case of the co-op that buys a refinery and subcontracts the labor to a different co-op. The state could pass legislation that would force the two firms to share the profits in such circumstances. But that may well make the refinery less attractive to prospective investors, and cause its price to fall. And every similar restriction would skew prices further, in various directions. This would defeat the entire point of market socialism, since its main appeal is based precisely on the claim that it can reach the same market prices as capitalism, which are considered by market socialists to be in some sense the *correct* prices at which the various commodities should be sold. Furthermore, the state would be playing a reactive role, forever having to identify the latest kinds of exploitative contracts and taking legal action against them.

1.5 Conclusion

It is not possible to disentangle a market system from exploitation. A market economy requires, if not private ownership, at least atomized ownership—and if not *de jure*, at least *de facto*. In other words, there must be a multitude of economic agents (either individuals or groups) that each have exclusive control over a portion of the means of production in society. They may or may not be legal owners, but they must have full control over the portion assigned to them, and the ability to choose which other people to

allow and which other people to exclude from the use of the means of production that are part of this portion. This type of arrangement, which we have named “atomized ownership,” is required in order for a market economy to function. And this same arrangement also makes exploitation possible, and indeed inevitable. Some economic agents will control a greater portion of society's means of production while others control a smaller portion or even none at all (and if this inequality does not exist from the beginning, the market system will soon generate it). Then, those agents that control greater portions will be able to leverage this to exploit the agents that control lesser portions or none at all. And, since those who *can* exploit others have a powerful incentive to actually go ahead and do it, we contend that market socialist models will inevitably generate exploitation, unearned income, class differences in society, and everything else that stems from these basic features.

There is no way to fix this problem except by disallowing the ownership of means of production by independent profit-seeking agents (whether individuals, or co-ops, or managers who act as *de facto* owners). And if we cannot have independent profit-seeking agents, then we cannot have a market economy.

Economic planning is not perfect. It is not a panacea. It may lead to some negative results. It may suffer from inefficiencies, just as a market economy does, although the inefficiencies of a planned economy are different from those of a market system. But economic planning remains the only principle on which it is possible to build an economic

system free from exploitation. Market socialism may be intellectually stimulating, but it is not a basis for an alternative system to that of capitalism.

CHAPTER 2

THE DILEMMA OF INNOVATION IN SOCIALISM AND SOME POSSIBLE SOLUTIONS

2.1 Introduction: The importance of innovation

Debates regarding capitalism and socialism often revolve around the question of which system can make better use of a given set of resources under given conditions. In other words, they often focus on the issue of static efficiency. The meaning of "better use" in this context is open to interpretation, often becoming the most contentious part of the debate, but it is doubtful that either system is inherently more "efficient" than the other. The famous economic calculation debate, at its height in the 1920s and 1930s, focused on precisely such notions of static efficiency, and ended with Oskar Lange showing that socialism can reach any equilibrium that capitalism can reach. (Lange 1938) A similar point was also made earlier, by Enrico Barone in 1908, before the debate as such had even begun. Barone used a model of static equilibrium to show that, *ceteris paribus*, a socialist state must organize its planned economy in the same way that it would be organized by a perfectly competitive market economy, except perhaps with different incomes for various groups of individuals. (Barone 1935) Once a static equilibrium framework is chosen, the claim that a unique optimal allocation of resources exists has significant intuitive appeal.

Given enough trial and error, any economic system should gravitate toward that optimal allocation. The debate between capitalism and socialism then becomes a debate about which system is more likely to reach or approach the optimal allocation in practice.

Analyses and comparisons of socialism and capitalism have long focused on this static approach, and even today, the most readily available critiques of Soviet socialism are based on its supposed static inefficiency. But static efficiency is always purely hypothetical. Equilibrium is never reached. A more important dimension to analyze is the difference between the two systems in terms of their paths of development. The ability of capitalism to promote technological innovation is a major reason for its historical success. European empires in the 19th and 20th centuries were able to extend capitalism throughout the world largely due to their technological edge. Closer to our time, the bewildering array of consumer products available under capitalism remains one of the main reasons why this economic system is attractive to large numbers of people. The lack of consumer goods on par with the West was one of the most important causes of popular discontent with Soviet-type socialism.

It is reasonable to expect that any future socialist societies will exist alongside capitalist societies in the world, for some time. They would undoubtedly become rivals, and in order for socialism to be successful, it must be able to withstand a multi-generational rivalry with capitalism. Innovation will play a crucial role in any such rivalry, in at least two ways: First, the popularity of each economic system will be affected by its ability to provide attractive consumer goods. This may not be the leading factor in people's decisions

about which system to support, but it will certainly be a factor. Second, any international rivalry between capitalism and socialism will necessarily involve a military component. The society with the more technologically advanced military will have an advantage, even if no war actually takes place.

2.2 Innovation under capitalism

Capitalism is a dynamic economic system that has unquestionably generated a great deal of innovation. The rapid advancement of technology in capitalist societies over the course of the 19th and 20th centuries is well documented. This technological progress has been accompanied by a rise in living standards and general improvement in human welfare, which may be difficult to quantify but which is widely acknowledged to have been impressive, including by capitalism's critics. Indeed, the critics of capitalism spoke very favorably of its promotion of technological progress as early as the mid-19th century. (Marx and Engels 1978)

How does capitalism promote innovation? The key ingredient is said to be competition. Private firms aim to maximize their profits, and so they pursue innovation in order to increase their profits and stay ahead of their competitors. For example, a firm that introduces a successful process innovation is able to produce its output at a lower cost and thereby undercut the competition. A firm that introduces a successful product innovation is able to entice buyers away from the competition. Potential investors are aware of these benefits, and provide financing for innovations in the hope of future returns. Some risk is involved, as not all research leads to innovations and not all innovations prove successful,

but investors can hedge against these risks by maintaining a sufficiently diverse portfolio. Finally, under perfect competition, the lack of barriers to entry ensures that new firms can enter any market where there is potential profit to be made by introducing an innovation. The same condition ensures the rapid diffusion of successful innovations, as other firms will see and copy the successful idea.

One major problem with this picture is immediately apparent: In a competitive market with no barriers to entry, an innovating firm can only profit from its innovation for a very short time before competitors move in and copy its successful idea, driving profits back down. And if profits from a new innovation are too small, or too short-lived, then the original innovating firm will not even be able to recover the funds spent on research and development. As a result, paradoxically, *too much* competition can reduce or even eliminate the incentive for innovation, by rendering it unprofitable. The precise aspect of capitalism touted as its greatest virtue becomes a vice.

To address this problem, governments in capitalist societies have universally decided to restrict competition by issuing patents and copyrights, thus effectively granting each innovating firm a monopoly over its innovation for a set period of time. This means that firms can look forward to *monopoly profits* from most types of innovations, which provide a greater incentive to innovate. Indeed, the political arguments in favor of patents and copyrights are always based on the idea that such laws are necessary to promote innovation, while copying is a form of theft because it deprives the innovator of profits derived from insight or creativity.

However, this means that diffusion (copying) of innovations is deliberately restricted, in order to create the necessary incentive for firms to engage in the other steps of the innovation process. An adequate incentive to innovate comes precisely from the guarantee that other firms will not be legally allowed to imitate the innovation, at least for some time. Thus, capitalism is faced with a tradeoff between the incentive to innovate and the speed of diffusion of new innovations. One can only be increased at the expense of the other. Also, crucially, the balance between these two concerns is not found endogenously, by market forces within capitalism itself. Rather, it is set externally by the government. Patent law is a matter of public policy. A public authority must decide how to balance the incentive for innovation with the speed of diffusion of new innovations. And up to the present day, there has been no attempt to quantify these two concerns or to find some mathematical optimum point between them. Rather, patent law is decided through the political process and largely dependent on the lobbying power of various large companies and interest groups. As such, there is no reason to believe that either the incentive to innovate or the speed of diffusion of new innovations is in any way "optimal" under capitalism. One or the other could well be lower than it should be, and there is no mechanism to detect this, let alone correct it.

Thus, the size of the incentive to innovate under capitalism is largely determined by public policy, and this public policy in turn is determined by the balance of political forces between various classes and interest groups. Many large firms lobby for legislation that would grant them greater monopoly profits, while small firms, consumers' groups, small

farmers and others often lobby against such legislation. When this issue is not given much attention in the general political environment (such as today), voters who support a given political party for unrelated reasons may help to increase or decrease monopoly profits unintentionally. There is no reason to expect that at any time the degree of monopoly power, based on relative political forces, will give rise to an outcome that is good for society in the area of innovation. If such a thing as an "optimal" rate of innovation exists, there is no inherent tendency under capitalism to approach that particular rate. There is also no way to calculate even theoretically what that rate might be. All that can be said is that the rate of innovation under capitalism generally appears to be quite high, compared to other economic systems.

There is also another way in which innovation under capitalism depends on factors outside of the capitalist economic system itself. Theoretical scientific research is to a large extent supported by public funds and philanthropic or charitable donations. This is the sort of research that does not have commercial or even industrial applications in and of itself, but often forms the basis on which other, more specific technological innovations are later based. Numerous modern technologies could not have existed without developments in theoretical physics that were not in and of themselves profitable, and some transformative commercial innovations - for example the internet - were originally based on publicly funded military research. This reliance on basic research done for reasons other than the profit motive is not a flaw in capitalism, but it may be a reason to doubt capitalism's superiority in matters of innovation. After all, if a capitalist state can fund not-for-profit

research, then so can a socialist state. To the extent that capitalist innovation relies on publicly funded research, this cannot be claimed as a *uniquely* capitalist phenomenon, and there is no reason to expect a capitalist system to be necessarily any better at this than other systems.

Notwithstanding the issues discussed above, the fact remains that capitalism produces a great number of innovations and is able to continue doing so over long periods of time. Perhaps they are not diffused as rapidly as they should be, perhaps the monopoly profits acquired by innovating firms are too great and lead to unnecessary inequalities, and perhaps the role of the state and non-profit institutions is such that the unique features of capitalism are only partly responsible for the innovations that occur under this economic system. Nevertheless, the record of capitalist innovation is impressive.

The incentive to innovate under capitalism is strong precisely because of the inefficiency of the process, in the sense that the decision to innovate in capitalism does not take social costs into account. Every time a new innovation is introduced, there are winners and losers. Even in the most basic scenario where only a new consumer product is introduced, there are winners (consumers) and losers (workers making the old products which were replaced by the new one, as well as workers in the supply chain of the old product). Thus, for each innovation, it is worth asking if the benefit is greater than the harm and if gains and losses are equitably distributed.

As noted above, the main driving force of innovation under capitalism is the pursuit of private profit, with some assistance from public funding for scientific research. Process

innovations are made for the purpose of cutting costs and increasing the profitability of private companies, while product innovations are made for the purpose of enticing new buyers and growing the firm's revenue (and thus, *ceteris paribus*, increasing profitability as well). As a result, innovation under capitalism is individualistic, or atomistic. It is done for the purpose of increasing the utility of specific individuals (the owners or shareholders of a firm, the consumers of a specific product), with no regard for the impact on society as a whole. If innovations had no impact on those who did not use them, there would be no problem - we could say that any innovation which improves the personal utility of those who use it is also a net gain to society. But in fact, the introduction of almost any new innovation has a major impact on third parties far beyond its immediate users. We could say that most innovations exhibit "externalities" of a sort, which can be positive or negative.

Negative externalities include several textbook examples, such as pollution and climate change. New innovations will be profitable if they utilize the cheapest energy sources, and those are often fossil fuels. The continued development of technology based on fossil fuels may impose immense costs on future generations, but as long as those costs are not felt by the firms developing the technologies in question or by their buyers, there is no incentive under capitalism to pursue different avenues of research. Governments may attempt to change the incentive structure through such measures as carbon taxes or carbon trading, for example, but recent experience indicates that it is very difficult for these to gain political traction.

In addition, negative externalities associated with innovation can take some less conventional forms. Innovations have the potential to render whole industries obsolete, and when such an industry is the main employer in a geographical area, this can lead towns or even whole cities to suffer an economic collapse from which they never recover. Capitalism involves a process of creative destruction that sometimes leaves large populations in long-term structural unemployment, as new jobs are created thousands of miles away from the place where old jobs were lost, and require an entirely different set of skills. This type of cost plays no role in any decisions regarding the innovation process under capitalism, and it could be said to represent a "temporal" negative externality: workers lose future earnings.

The temporal aspect of negative externalities associated with some innovations - the fact that they impose costs on third parties in the future much more than in the present - makes it especially difficult to handle this problem through the usual policies that are used to correct negative externalities under capitalism. These policies typically rely on property rights: the third party that is negatively impacted by some transaction can be granted a property right such that the negative impact represents an infringement of that right, which enables the third party to negotiate (and, if necessary, bring the matter to court) in defense of its interests. In other words, the costs are internalized. However, under capitalism, workers cannot have a property right over their employment, so that they could claim compensation if their jobs disappear or their skills are rendered obsolete by innovation.

Neither is it possible to establish property rights over a highly uncertain future so that individuals could claim compensation for future hardship caused by climate change.

There is one final problem with capitalist innovation that may fall under the broad concept of a "negative externality". There are some innovations that can place consumers or firms in a situation akin to a Prisoner's Dilemma. Suppose that there is some innovation which, if widely adopted in society, provides no net benefits or perhaps even causes a net decrease in utility for all agents who adopt it. But suppose that this innovation does provide significant net benefits to the first few agents who adopt it, as long as no one else has adopted it yet. Thus we have an "Innovator's Dilemma": the socially rational choice would be for no one to adopt the innovation, but the individually rational choice is to adopt the innovation first before anyone else does. In capitalism, innovations of this type will always be widely adopted.

There are also innovations that have significant positive externalities, including product innovations that are public goods and process innovations that benefit the community around the firm which adopts them. Capitalism is very likely to neglect such innovations, and capitalist firms are likely to ignore avenues of research that may result in them. This is not a trivial matter affecting only a few select public goods. The entire technological trajectory of a society can be changed if it focuses almost exclusively on innovations that are intended to lead to profitable private goods. For example, it is entirely possible that there are potential innovations to be made in the realm of public transportation that capitalism has not made because of its private goods bias. Likewise, it is possible that

capitalism has privileged private entertainment at the expense of public entertainment, and so on.

Of course, we cannot know what innovations *would have been made* if we had different economic institutions, but the point is that the cost-benefit calculation under capitalism includes only private costs and benefits to the innovating firm. This can lead to some innovations being produced and disseminated even though they are a net loss to society. Or, conversely, it can lead to some innovations not being pursued because they are not profitable, although they would have considerable net social benefit. Here we have a powerful counter-argument to Enrico Barone's contention that capitalism and socialism are just two different means to reach the same end. In a static world that may be true, but in a dynamic world, capitalism and socialism will make different innovations and develop different technologies. This means that they are not, in fact, both trying to reach the same optimal allocation of resources. The results achieved by socialism are not equivalent to the results that could be achieved by capitalism with an appropriately egalitarian set of initial resource endowments.

2.3 Innovation under socialism

Having surveyed some of the shortcomings of the capitalist approach to innovation, the question then becomes if socialism - or *some* type of socialism - can do better. Here, we must define what we mean by "socialism." We will not discuss the idea of market socialism, for the reasons described in the previous essay, but also because a market socialist system, which still relies on competition between profit-seeking firms and merely

changes the ownership structure of those firms, would approach innovation in precisely the same way as capitalism and could therefore be expected to share the same advantages and disadvantages as capitalism. This is yet another way in which the idea of market socialism seems destined to produce the same results as capitalism.

The socialism to be discussed in this section is therefore based on a planned economy with social ownership of productive property. This definition is broad enough to include a wide variety of different socialist economic systems, from the authoritarian Soviet model to various kinds of democratically planned socialist models. The Soviet model is the one type of socialism for which we have abundant historical data, so it should serve as the starting point for any analysis of the benefits and problems of socialism. However, that model has very few advocates today, and there is broad agreement that any future socialism must be substantially different from it and must contain strong democratic elements. Such elements can provide solutions to many of the flaws of the Soviet model, including with regard to innovation, although as we will argue below, democracy would not necessarily provide an easy solution to all possible problems of the innovation process under socialism.

2.3.1 Soviet socialism and innovation

The Soviet model of socialism was presented by its advocates as a technologically progressive economy, and there was some merit in this view. The Soviet model certainly achieved rapid industrialization and sustained high levels of economic growth for several decades, which included the development and dissemination of new technologies. The

Soviet Union pioneered space exploration, and was a world leader in theoretical sciences. It developed advanced military technology, and also civilian technology in a number of fields. Soviet eye surgery equipment and seamless rail laying machines, for example, were among the best in the world by the 1970s. (Berliner 1976) Labor productivity also grew rapidly until 1975. (Kotz and Weir 2007)

Several arguments were made in favor of the potential of the Soviet model for innovation. It was argued that the Soviet model could innovate more efficiently and disseminate innovations more rapidly than capitalism, because there were no private firms with a desire to maintain trade secrets, there were no patent laws to limit or slow down the spread of new technologies, and there was no wasteful competition as in capitalism (wasteful in the sense that different capitalist firms may duplicate efforts as they each try to independently develop similar technologies ahead of the competition). In addition, the Soviet system encouraged scientific education, provided ample funding for basic research, and had a variety of institutions with an explicit mandate to produce innovations. These included R&D Institutes, the State Committee for Innovation and Discovery, the technical departments of the industrial ministries, and also local design departments in many individual enterprises. The profit motive was absent, but in its place there was a central plan that encouraged innovation by raising enterprise labor productivity targets each year and through other administrative methods. The Soviet state made some efforts to encourage amateur innovators as well.

Yet for all that, and in spite of the very real successes of Soviet innovation in some areas, the system had major flaws pulling it in a technologically conservative direction and ultimately preventing it from outpacing capitalism in the invention and application of new technologies. These flaws were first of all present in the incentives faced by enterprise directors. The primary goal they were given was to fulfill the production targets in the current economic plan, and their monetary incentives were largely focused on this. As a result, small process innovations that had obvious benefits were adopted quite readily in order to increase productivity, but more significant innovations were simply too risky to adopt in most cases. The incentives called for continuing with tried-and-true methods that guaranteed fulfillment of the plan, rather than risking doing something new that may or may not work as intended. This was especially true given the policy of "taut planning," which aimed to provide each enterprise with precisely the inputs it appeared to require to reach its output target, and no more than that. This meant that any delay or minor error could cause an enterprise to miss its plan targets, and most directors were not keen to increase their risk by introducing innovations.

Competition under capitalism may cause the "Innovator's Dilemma" mentioned in the previous section, pressuring firms to innovate even when it would be better not to do so, but the Soviet model had in some ways an opposite problem: lack of negative consequences for a failure to innovate. Enterprises could not be driven out of business by more innovative rivals, and neither were they closed or downsized or otherwise punished if they remained technologically conservative.

The Soviet system did not suffer from the capitalist bias towards private goods in the innovation process. It developed an excellent public transport network, for instance, both within cities and throughout the country. However, the Soviet system did suffer from a bias in favor of what might be called "prestige goods". Throughout its existence, but especially during the Cold War, the USSR repeatedly attempted to demonstrate its superiority over its capitalist rivals by investing heavily in projects that were designed to be more eye-catching than useful, and also by focusing excessively on military spending and military technologies. This is sometimes called the problem of "planners' preferences", but it should be noted that Soviet economic planners, despite their considerable power and lack of popular oversight, did not generally allocate extensive resources for their own private consumption. Rather, they allocated extensive resources to boost national prestige.

Finally, in terms of the environmental impact of innovation, the Soviet model was no better than capitalism, and in many ways it was worse. Like capitalism, it also did not seek to develop innovations with a lower environmental cost. However, unlike capitalism, the Soviet system did not have any internal mechanism that would compel firms to seek the most profitable innovations regardless of environmental impact. Soviet planners or the top political leadership *could* have simply chosen to protect the environment, if they had wished. They did not wish to do so, and the undemocratic character of the system enabled them to remain on their chosen path regardless of public opinion.

2.3.2 Democratically planned socialism and innovation

There have been several different proposed models for a democratically planned socialist economy, including the system of negotiated coordination put forward by Devine (1988), the participatory economics envisioned by Albert and Hahnel (1991), and the computerized "new socialism" of Cockshott and Cottrell (1993). They differ in important respects, but they all share similar criticisms of the Soviet system and propose a type of socialism that is more democratic, both in the state and within the workplace. This has important consequences for innovation.

First, merely having an open and democratic society, with elected representatives answerable to a voting public, would go a long way towards fixing some of the shortcomings of the Soviet model. Such a society would not invest in useless "prestige goods" that do not improve anyone's welfare, and - assuming that voters are concerned about their own future and that of their children - steps would be taken to develop environmentally-friendly technologies and innovations that make use of renewable energy sources.

However, democracy would not automatically remove the incentives towards technological conservatism faced by enterprises in the Soviet model. Workplace democracy, an important element of any participatory model of socialism, is not inherently technologically progressive, any more than political democracy. If the workers of an enterprise control their own workplace but face the same external incentives as Soviet enterprise directors, then they will act the same as those directors with respect to

innovation. Therefore, planning institutions and incentives would have to be designed differently in order to encourage the widespread adoption of innovations by enterprises.

Taut planning would have to be abandoned, and enterprises should not be discouraged from taking risks. The incentive structure should be less focused on penalties for failure and provide more rewards for unexpected success, compared to the Soviet model. Communication should be encouraged between enterprises and their suppliers, and in fact it would be entirely feasible and desirable to make all economic information publicly available. This did not happen in the Soviet model, which operated under a siege mentality and placed a high emphasis on secrecy.

At the same time, the benefits of the Soviet model could be maintained: high investment in basic science, public goods being given adequate importance, and the free circulation of technical knowledge without legal barriers imposed by patents or copyrights.

A democratically planned socialist economy would not suffer from the shortcomings of innovation under capitalism. The direction of research and investment in the pursuit of innovations in various fields could become matters of public debate. It could be democratically decided, for example, whether to invest in the pursuit of more efficient electric cars or modernize the rail network instead. Thus, public and private goods could be placed on a level playing field. Innovations that are socially harmful could simply be abandoned or not pursued in the first place, even when they are such that a private firm could have gained an advantage in the marketplace by being the first to adopt them.

Providing adequate incentives to innovate, and ensuring the dissemination of useful innovations, would be a matter of public policy. There would be an elected body with the mandate to oversee the various research institutions, to provide adequate resources to individual inventors, and to promote the adoption of new technologies and the development of new products by enterprises. The precise nature of such a body, and its membership, would have to depend on which model of democratically planned socialism we have in mind.

2.4 The dilemma of innovation in socialism

We can anticipate one major source of potential problems related to innovation in a democratically planned socialist economy: What if rapid innovation proves unpopular? Innovation is inherently disruptive, because it destroys jobs and industries. As old technologies are superseded, product lines become obsolete, production processes are changed, and certain kinds of jobs are no longer needed. Thus, technological progress leads to insecurity about the future of one's job. Even with an employment guarantee, the loss of one's job may have to involve retraining, changing careers, or moving across the country. Therefore we can expect opposition to the implementation of certain beneficial innovations, and we can expect that, at least in some cases, this opposition will be successful.

Workers may oppose disruptive innovations *in their capacity as workers*. But in their capacity as consumers, they will demand new and better products, which would sometimes require disruptive innovation. This may be regarded as an internal contradiction

of socialism. We can have cutting-edge consumer products, or we can have stable employment, but perhaps not both. In a democratically planned socialist economy, the voters will be able to decide between one and the other, on a case-by-case basis, so that some innovations will be pursued, others will be scrapped because of their disruptive effects, and some will be introduced at a deliberately slow pace.

Meanwhile, capitalism always comes down in favor of the new consumer products every time they conflict with stable jobs. Since socialism will not always do this, it is likely that socialism will have more job security but fewer cutting-edge consumer products than capitalism.

If there is an international rivalry between socialism and capitalism, the citizens of the two kinds of societies will be able to compare their lifestyles with those in the other economic system. Workers living under capitalism may be attracted by the stable jobs, shorter working hours, democratic workplaces and social benefits (such as universal healthcare and education) provided by socialism. However, those living under socialism will probably also be attracted by the superior consumer goods available under capitalism. Moreover, as long as the speed of innovation in socialism is lower than that in capitalism, the “consumer gap” with capitalism would grow over time. The difference between the consumer goods available in capitalism and those available in socialism would steadily become wider.

This may not be considered a problem for socialism if people value stable jobs more than new consumer goods, but not everyone does. In our scenario, we are assuming

that the majority of people living in socialism value stable jobs more – because that is the reason for the consumer gap in the first place – but there would be a minority who disagree. If the consumer gap is large enough, and/or that dissenting minority has such an overriding preference for consumer goods that it outweighs any other benefits they might receive from socialism, then we have a category of people with a material interest in supporting capitalism, even though they are part of the working class.

The fact that some workers in a socialist society might prefer capitalism because of better consumer goods is not a novel observation. In fact, this exact phenomenon played a role in the demise of the Soviet system. However, it is a problem that has not been sufficiently studied by advocates of socialism. In general, the response to the flaws of Soviet socialism has been to propose other models of socialism that would not have those flaws. But the tradeoff between job security and innovation doesn't appear to be one that can be easily eliminated within socialism. It is not due to the overly centralized or undemocratic nature of the Soviet model, but rather due to the nature of innovation itself.

Furthermore, there is a military aspect to the innovation problem, which did not affect Soviet socialism because Soviet planners always placed a strong emphasis on military technology and development, but which may affect democratically planned socialism. Innovations that aid the military but have no effect on the welfare of ordinary people are also likely to have a disruptive effect on employment, as in the case of consumer-oriented innovations. If tanks become obsolete and are to be replaced by a better technology, then tank factories might have to be closed, and the lives of the people working

there would be disrupted. This is likely to face democratic popular opposition, especially since, in this case, the job disruption does not even bring any improvement in living standards.

This is a problem because it might put socialism at a military disadvantage with respect to capitalism, which would hurt the socialist side in international relations even if no military conflict takes place. Suppose we have a situation of international rivalry between two sides. If one side knows it *would* lose any war that *did* take place, then that side will act timidly and avoid even non-violent confrontation, so as not to provoke the other side into war. Thus, it would be difficult for such a socialist side to prevail in a long-term rivalry, even if it is a peaceful one. For both sides to stand a good chance of success in a peaceful rivalry, they must be more or less evenly matched militarily, in the sense that it must be open to debate which side would win in case of a war, so that neither one feels that it can do whatever it wants with impunity or that it must tread lightly and avoid confrontation.

The Cold War was a multi-faceted struggle between two different international economic orders. Any future socialist economic order will most likely have to face capitalism in a somewhat similar struggle. Can such a struggle be won by socialism without matching capitalism's rate of technological development? That is the question.

2.5 Possible solutions

One option is to simply accept this as a positive feature of socialism, even if it does come with certain disadvantages. If the rate of innovation has been slowed down by democratic decisions, some may ask, "What is the problem? The people have decided that it is better to advance slower, and that is a valid choice." It may be a valid choice, and it may even be one of the best features of socialism that it does not force people to constantly switch jobs and uproot their lives. In contemporary capitalism, "flexibility" has become a byword for "insecurity." Many people would appreciate less "flexibility" in their careers and work schedules.

However, if this choice caused the socialist society to lag behind rival capitalist societies in technological development, that would be dangerous for the long-term survival of socialism, as detailed above. Under certain favorable circumstances, perhaps the problem could be ignored. For example, if socialism begins by taking hold in the most technologically advanced countries, the faster rate of innovation under capitalism would only help the capitalist societies to catch up over time. As we've seen from the Cold War of the 20th century, it is entirely possible for the society that is catching up to lose the race to the one that began with a sufficiently large head start. In other words, there may be no problem if Orthodox Marxism ends up being right about where the transition to socialism is likely to begin in the future.

Discounting the possibility of exogenous factors giving a technological advantage to socialism over capitalism, is there some way to overcome the problem entirely, to

eliminate the tradeoff between job stability and technological innovation? There might be. Technological development could reach a point at which the kinds of jobs that can be threatened by innovation have already been automated. For example, the forces of production could develop to the point at which all the actual physical production is done entirely by machines, and the only human labor still needed is creative labor such as designing new products or new technologies, programming computers, and so on. In that case, innovation would not have to disrupt anyone's job, because creating innovations *is* the only job that human beings still do. Technological progress itself could save us from the downsides of technological progress. We are not at that point yet, obviously, but we *could* reach it before the next transition to socialism occurs.

Both of the options above are possible, but they essentially rely on luck. There is not much that anyone could do to make them happen. What if the future socialist society is “unlucky”, and has neither a technological head start nor the ability to completely automate all physical production? Then the socialist society would face the tradeoff between job stability and technological innovation, while competing with advanced capitalist societies. This was, in fact, the situation that all past socialist experiments faced. What is to be done in such a case?

One option would be for socialism to provide only a general employment guarantee, without a guarantee of maintaining the same job or even a job in the same enterprise. In other words, socialism would sacrifice job stability (but not security) for the sake of innovation. This is a simple option, viable in all circumstances. The problem is that it

would diminish the benefits of socialism over capitalism, because it essentially amounts to making socialist enterprises behave a bit more like capitalist ones. In addition, this option may not be popular with the voting public. It could be combined with compensation packages given to workers who are forced to change jobs. Sufficiently large compensation packages could make up for the disruption of involuntarily changing jobs to such an extent that it is no longer regarded as a net negative by the workers experiencing it. However, that could be quite costly for the rest of society, if innovation frequently renders jobs obsolete.

Another option would be to have “social priority campaigns” in response to challenges from capitalism. If the socialist society finds itself slipping behind technologically in a certain area that is considered particularly important by the voting public, a campaign could be launched to improve that specific type of technology and overhaul the specific industry in question. In other words, job stability could be the general rule, but exceptions could be declared in special circumstances. This could also be combined with compensation packages given to workers who are forced to change jobs, and it would be less costly to make them quite large in this scenario, because they would be less common.

A third option would be to import an attractive but socially costly new product from the capitalist world for a time while only gradually introducing production of it. After all, consumers only want to get the new product, not to produce it. This might be a cynical response, since it amounts to unloading the social costs of the new product onto the capitalist world, but it could also be seen as using capitalism against itself. It may not

always be a viable option, however. The capitalist world is likely to impose embargoes on exporting certain goods to the socialist world – especially those with military applications.

Other options for resolving this dilemma may also exist, and several options may be combined. It is possible that different socialist societies will handle this problem differently. It is also possible to imagine a socialist city-state full of enterprising people who enjoy changing jobs on a regular basis, who do not regard the social costs of innovation as being costs at all. However, it is important to acknowledge that this problem exists, and that it is a problem which must be confronted by advocates of socialism.

CHAPTER 3

SOVIET-TYPE SOCIALISM AND THE TRANSITION TO CAPITALISM: WHICH IS THE FAILURE?

3.1 Introduction

Since the end of the Cold War, the dominant narrative about socialist economies of the Soviet type has been one of failure and inefficiency. They are said to have been unable to provide the same living standards as capitalism, or unable to maintain economic growth, or unable to adapt to the requirements of the current stage of technological development. This failure is widely considered one of the major causes (if not the sole cause) of the fall of the Soviet Union and its allied governments in Eastern Europe. And, at first glance, the evidence supports this assessment. Soviet-type economies had experienced impressive growth rates from the 1930s to the early 1960s (minus, of course, the years of the Second World War), and one of the declared aims of the USSR in the Cold War was to eventually overtake the United States as the world's leading economic power. But, starting in the mid-1970s, a period of economic stagnation set in. Growth rates were no longer enough to allow the Soviet-type economies to catch up to the West. In fact, some of them were even starting to fall farther behind. This new economic reality generated a combination of popular discontent and destabilizing market reforms that resulted in the fall of the USSR and its

allied governments, and the transition of all former socialist economies in Eastern Europe and Central Asia toward capitalism.

So it would seem that the Soviet-type economies did indeed fail to meet expectations. But failure *to meet expectations* is not necessarily an indication of an inferior economic model. It can also be an indication of inflated expectations. And the early expectations about the Soviet economic model were certainly high. In the 1960s and early 70s it was hoped that living standards in Eastern Europe could catch up to Western living standards, and perhaps even overtake them, in a single generation. The Soviet-type economies proved unable to live up to this dream. But did they "fail" in an absolute sense? Is a socialist planned economy inferior to capitalism? To find an answer to this question, it is necessary to actually compare economic performance under socialism and capitalism, and not merely to measure the results of Soviet-type socialism against the high standard of catching up to the most advanced capitalist economies. After all, regardless of economic system, only a few countries that started at a low level of development compared to the leading capitalist countries have yet caught up.

How does one compare the economic performance of socialist economies against capitalist economies? A popular approach during the Cold War was to make "East vs. West" comparisons. These typically found the predictable result that the West had a higher *level* of living standards but the East had a higher *rate* of economic growth and therefore improvement in living standards (prior to the stagnation period). However, there were inevitable problems with such comparisons. Today there is a new way to address this as a

result of the now long completed transition to capitalism. Ideally, a comparative study should seek to look at pairs of countries that are as similar as possible except for their economic systems. But there were a vast number of differences between Eastern and Western Europe (or between the USSR and the USA), by no means limited to their economic systems. They began to industrialize at different times in history, some were ravaged by war and others were not, some were far more urbanized than others, they had different cultures, and so on.¹ Secondly, "capitalism" does not mean "what exists in Western Europe and North America". By no definition of capitalism can we say that the capitalist world (and therefore its economic performance) is represented by the developed countries of the West and them *alone*. The Global South was (and is) also largely composed of capitalist societies. There is no reason to pick France and the United States as the benchmarks of capitalism-in-general, as opposed to, say, Brazil and Honduras.

For these reasons, we propose a different approach in evaluating Soviet-type socialism against capitalism: "East vs. East" comparisons. The countries which formerly had socialist economies have now spent over a quarter-century with capitalism. It has become possible to take a long-term view of their experience with capitalism, and ask whether it has been superior or inferior to their experience with the Soviet model of socialism. The narrative of the "failure" of Soviet socialism would imply that the transition to capitalism should have brought major economic improvements - at least in the long term.

¹ This does not apply in the case of comparisons between West Germany and East Germany, but that specific case cannot be considered representative of the two economic systems in general. Additionally, even the two German states did not start with the same infrastructure or the same treatment by the Allies.

And we are now at a point where we can study the long term effects of the transition to capitalism and compare them with the previous period. This is the aim of the present paper.

3.2 Historical economic performance and trends

Twenty-two countries have been selected for study in the present paper. They consist of the fifteen former republics of the USSR, plus seven states in East-Central Europe that had socialist economies of the Soviet type during the Cold War period: Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, and Slovakia. East Germany was excluded because German reunification makes it a special case (it was absorbed into a larger capitalist country rather than transitioning independently), and because of the difficulty in finding post-1990 data for the former East Germany. Likewise, Yugoslavia and the ex-Yugoslav states have been excluded, because they are a special case. The economic system they had before 1990 was a form of market socialism, rather than a socialist planned economy of the Soviet type, and in the economic data for the 1990s it is impossible to disentangle the effects of the transition to capitalism from the effects of the Yugoslav wars.

The twenty-two countries we have selected did not use precisely the same economic model in the socialist period. While Soviet-type economic planning and state enterprises were dominant in all of them, many of them also incorporated market activities to varying degrees. Poland and Hungary allowed a greater scope for the market than Albania or the Soviet Union, for example. Nevertheless, the twenty-two countries were sufficiently similar to make comparisons meaningful.

The economic variable we have chosen to focus on is GDP per capita, because it is commonly used as a proxy for living standards. It is true that this is a highly imperfect proxy, since it ignores income distribution and positive and negative externalities, and is only loosely correlated with other important indicators of human welfare such as life expectancy and infant mortality. Nevertheless, both Soviet and Western economists and government officials used the rate of growth of output per capita as a measure of success (the Soviets used NMP rather than GDP, but it was still intended to be a measure of output). This paper focuses on GDP per capita because both advocates and critics of the Soviet system focus on it (or on other measures of output) to evaluate performance.

The Total Economy Database (The Conference Board 2016) provides data on GDP per capita in 2015 US dollars, with updated 2011 purchasing power parities. These are the numbers that we will use in what follows. The available data begins in 1980 for the former SSRs, in 1985 for Slovakia, in 1970 for the Czech Republic, and in 1950 for the other states of East-Central Europe. As a result, it does not allow us to draw conclusions about Soviet-type socialism before the stagnation period.

With the available data, the picture that emerges is a familiar one. Nearly all the states under consideration followed the same basic pattern: Slow positive growth, stagnation or a slow decline in the 1980s, followed by a sharp economic collapse in the 1990s (the first phase of transition), followed by recovery and continued growth at various

rates up to the present day.² A major factor in determining the present-day situation is the depth of the 1990s collapse. Figures 1.1 - 1.7 present these raw numbers.

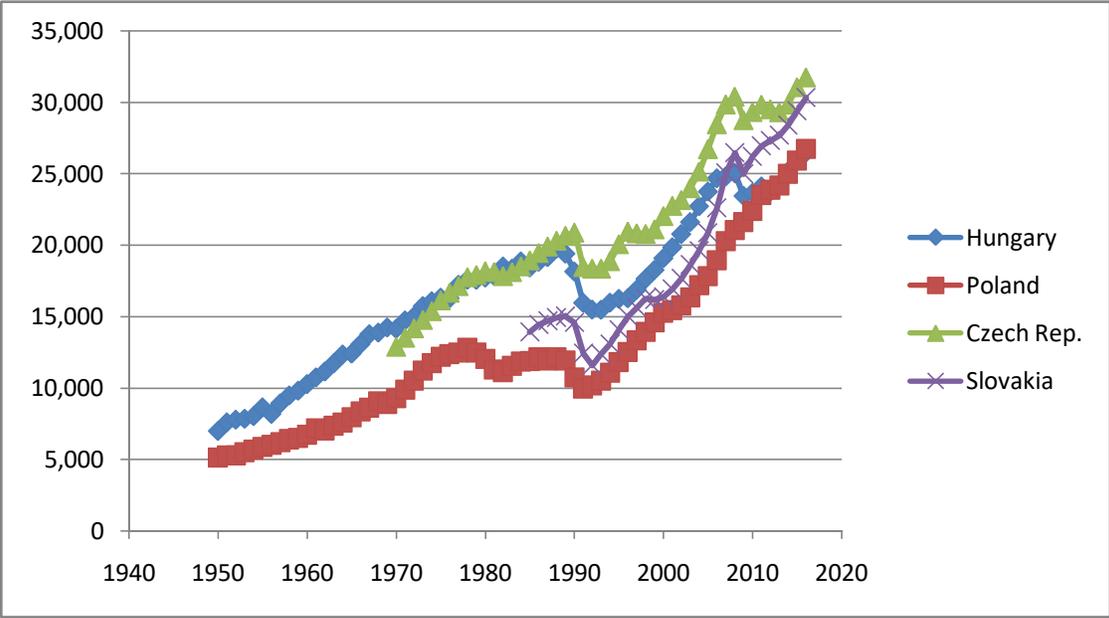


Figure 1.1: GDP per capita for East-Central Europe (part 1)

² Since these are graphs showing the level of GDP per capita with a linear scale on the y-axis, a constant slope does not indicate a constant growth rate. A constant growth rate generates an exponential curve. Where the curve is linear, that indicates a falling growth rate.

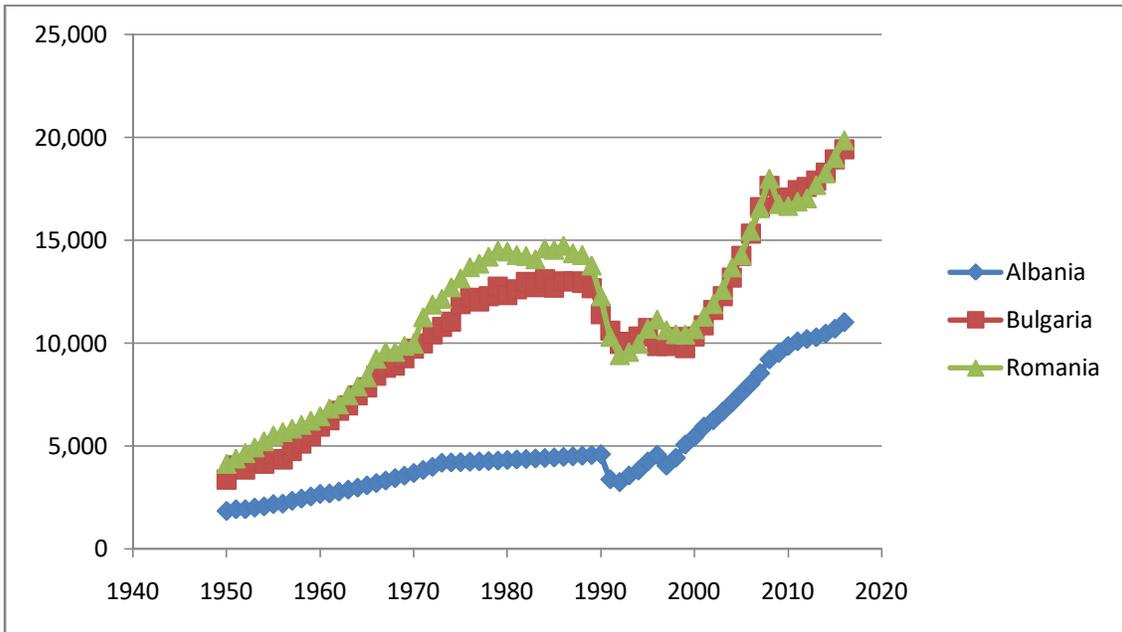


Figure 1.2: GDP per capita for East-Central Europe (part 2)

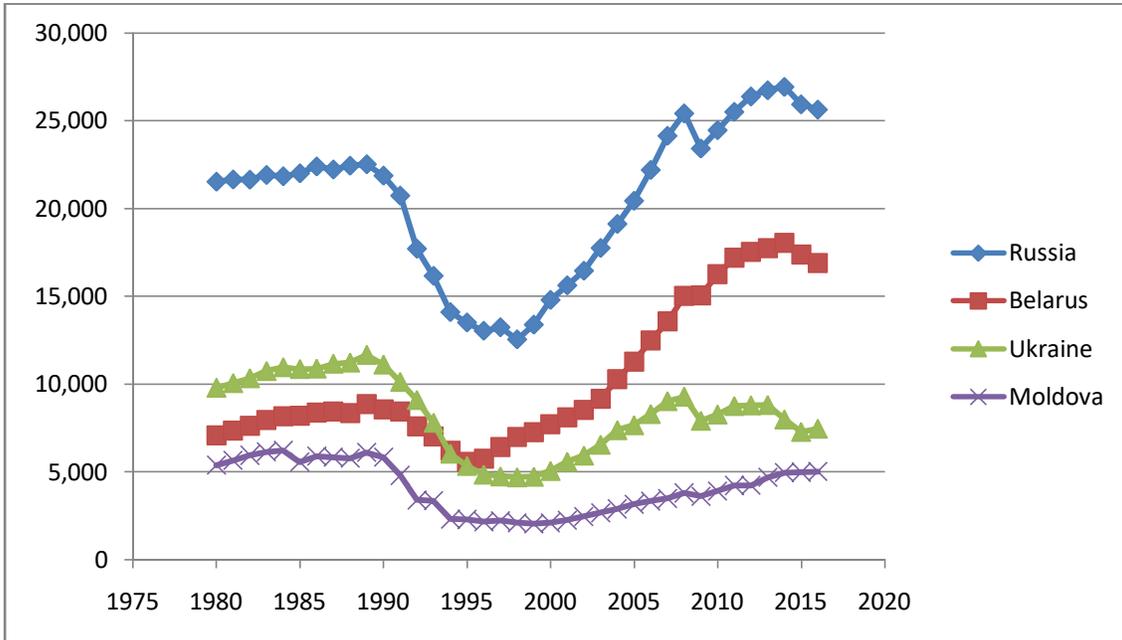


Figure 1.3: GDP per capita for Ex-Soviet Eastern Europe and Russia

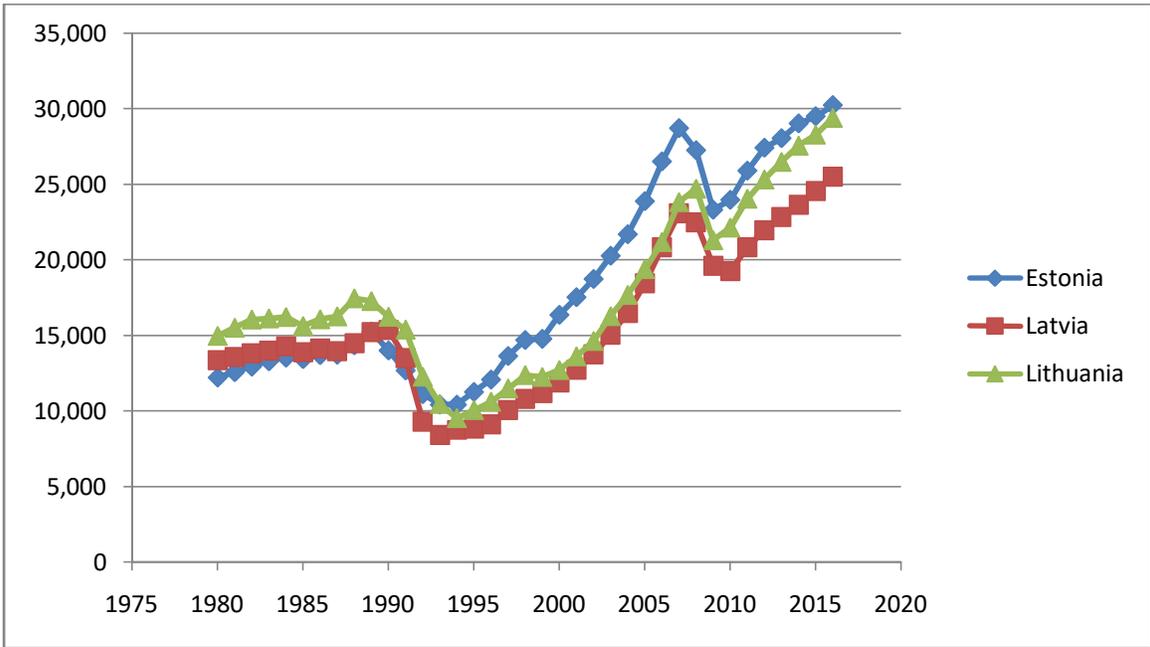


Figure 1.4: GDP per capita for the Baltic states

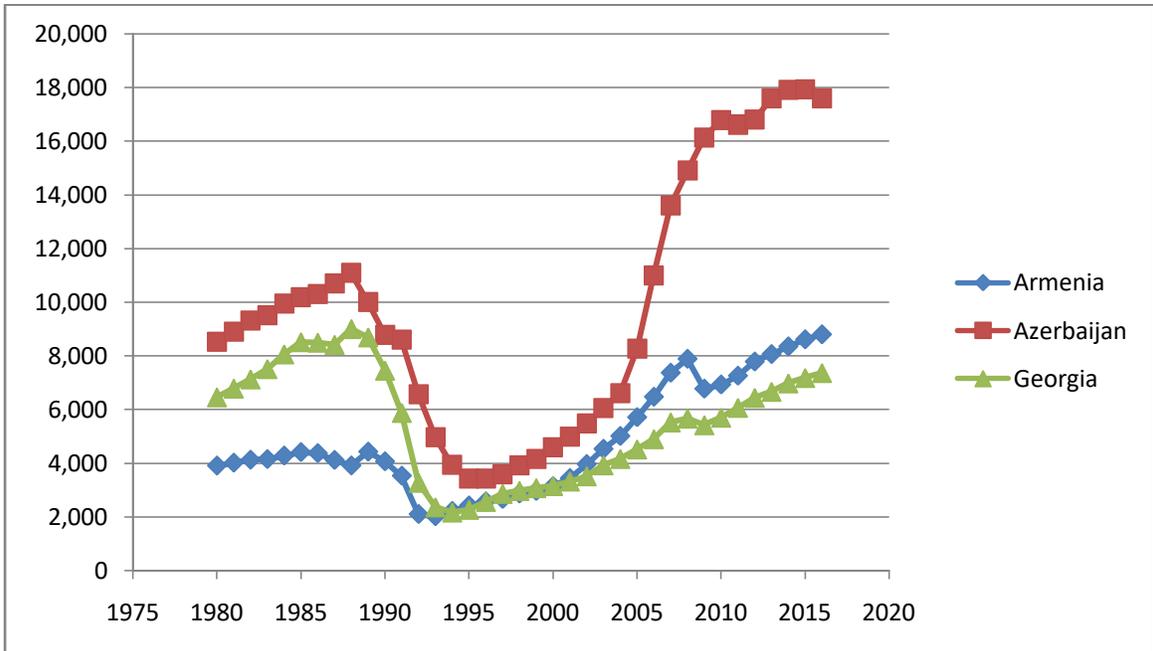


Figure 1.5: GDP per capita for the South Caucasus

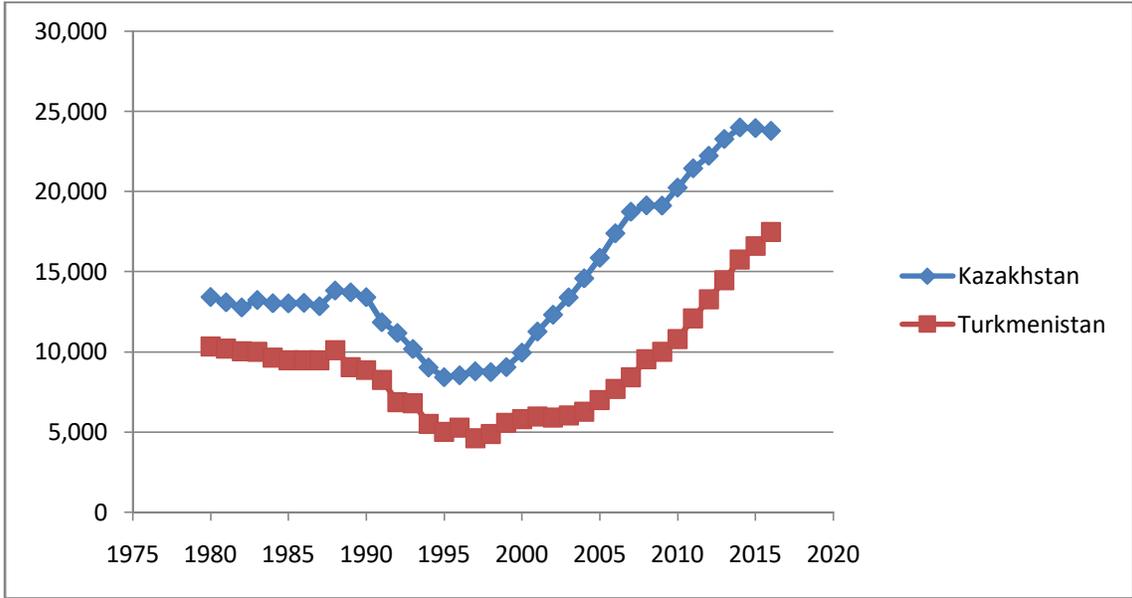


Figure 1.6: GDP per capita for Central Asia (part 1)

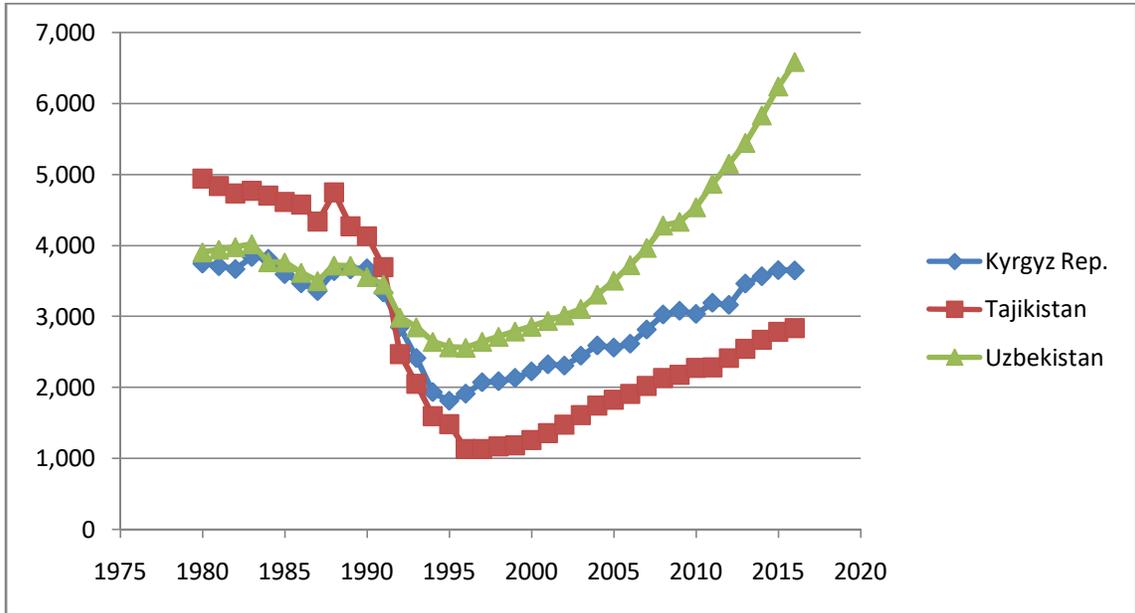


Figure 1.7: GDP per capita for Central Asia (part 2)

This raw data is not very useful for the purpose of comparisons between countries, however, since they often begin at very different levels of GDP per capita at the start of the relevant period. For this reason, we have constructed a second set of graphs using normalized data. In figures 2.1 - 2.5, the level of GDP per capita in the year 1985 is normalized to 1, allowing for direct comparisons between the transition experiences of different countries. The year 1985 was chosen as the starting point for two reasons. It is the first year for which we have a complete data set (since there is no earlier data for Slovakia), and it is also the last year before Perestroika was introduced in the USSR. We will continue to use 1985 as the base year throughout this paper.

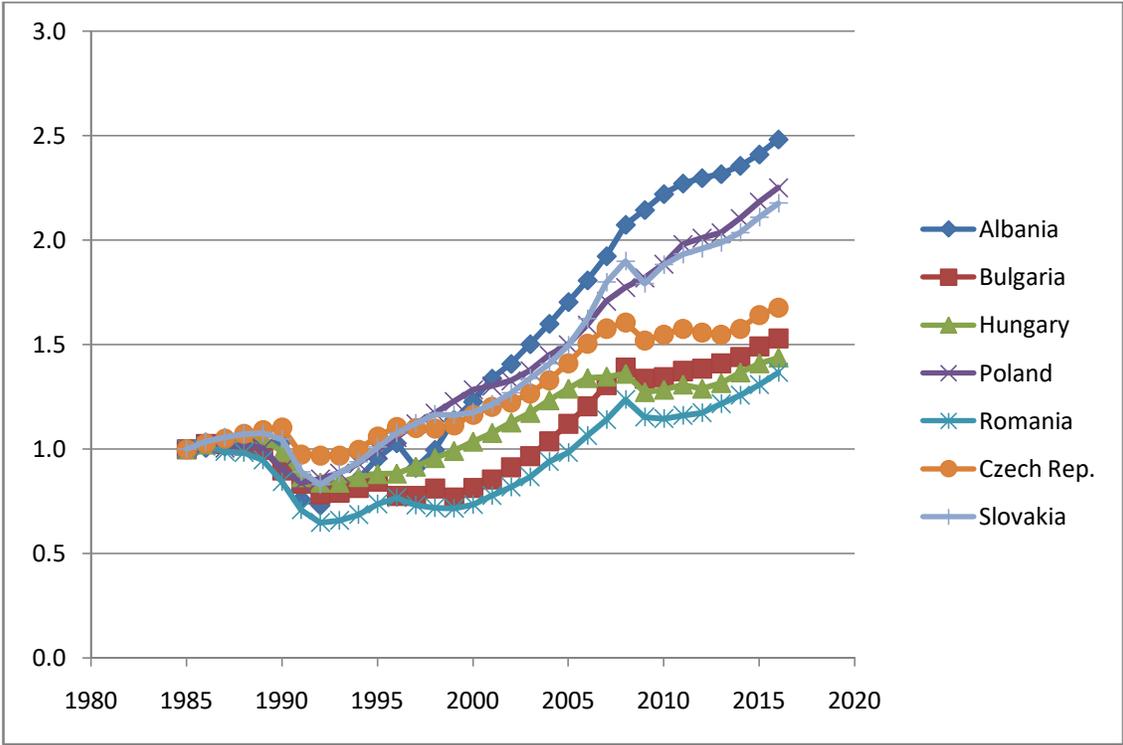


Figure 2.1: Normalized GDP per capita for East-Central Europe

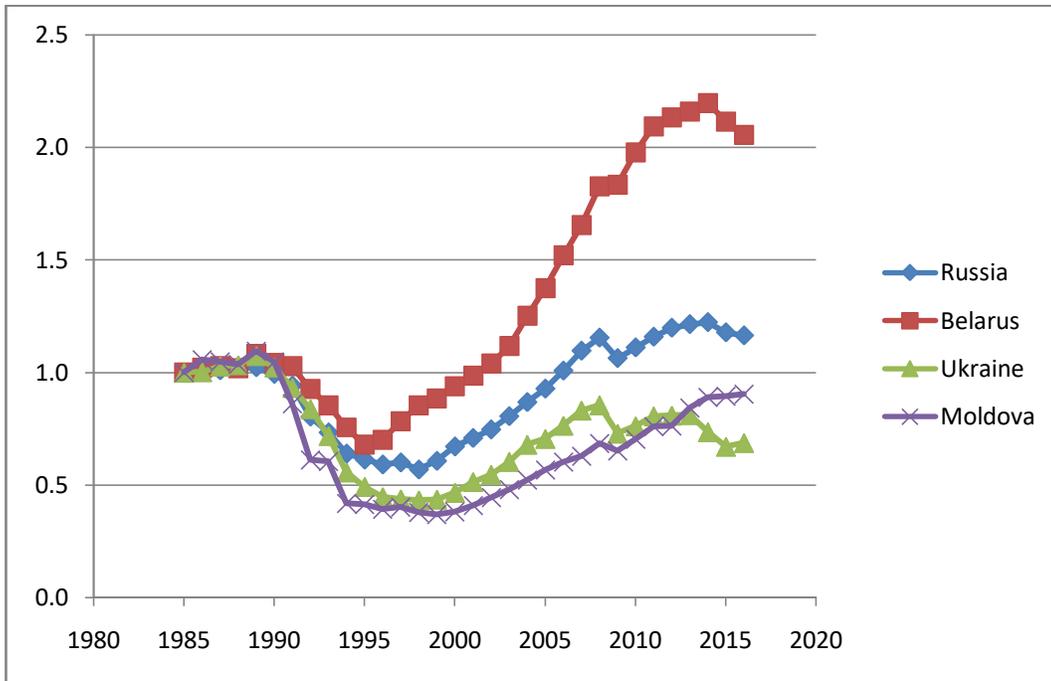


Figure 2.2: Normalized GDP per capita for ex-Soviet Eastern Europe and Russia

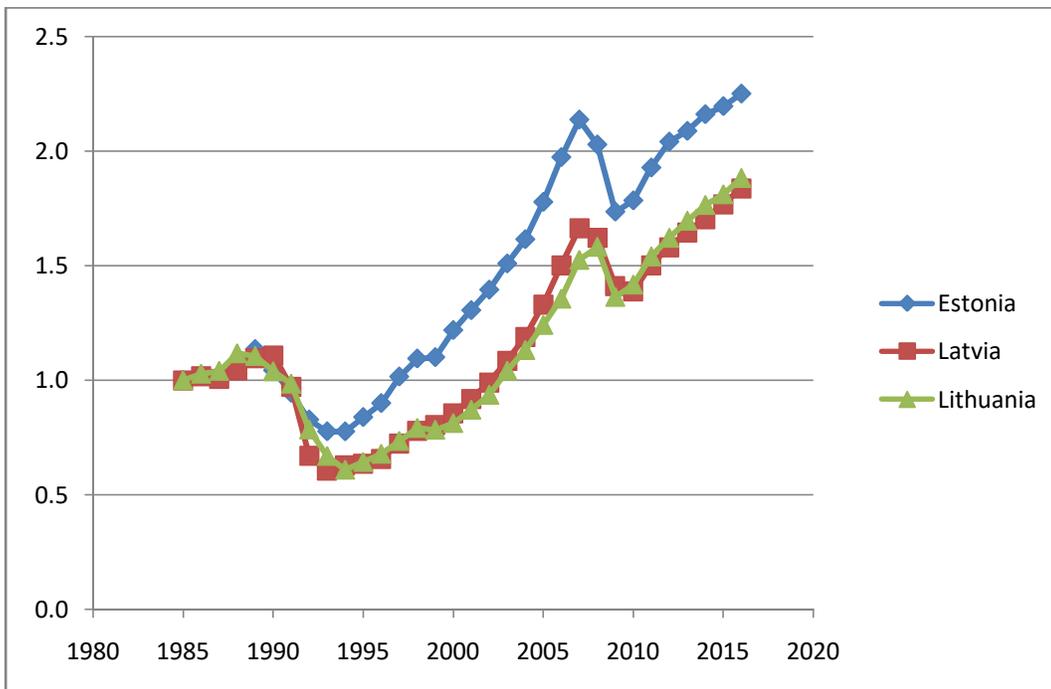


Figure 2.3: Normalized GDP per capita for the Baltic states

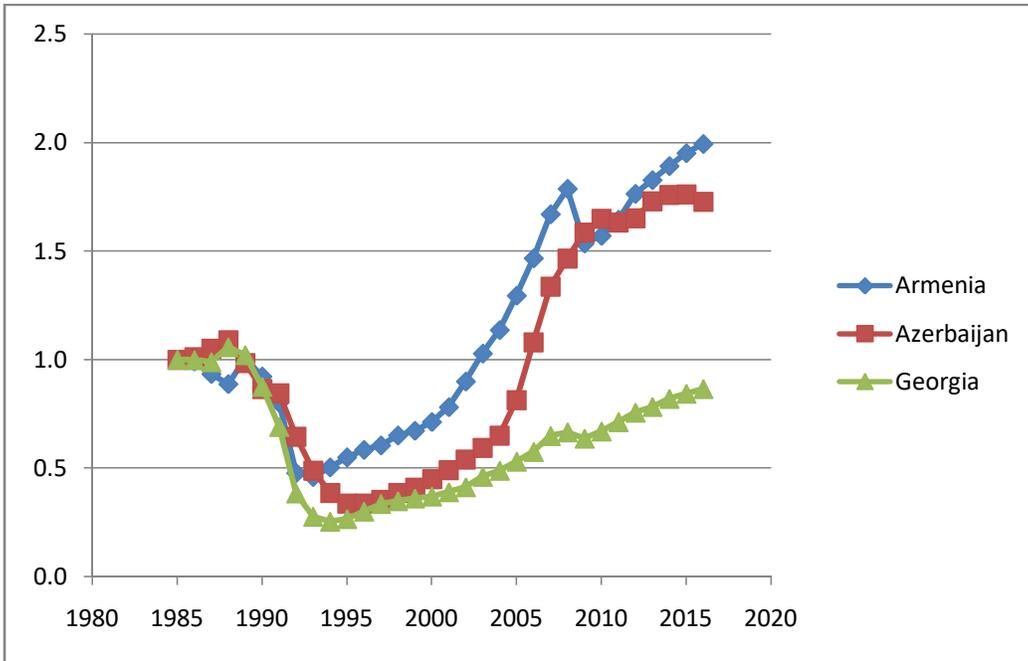


Figure 2.4: Normalized GDP per capita for the South Caucasus

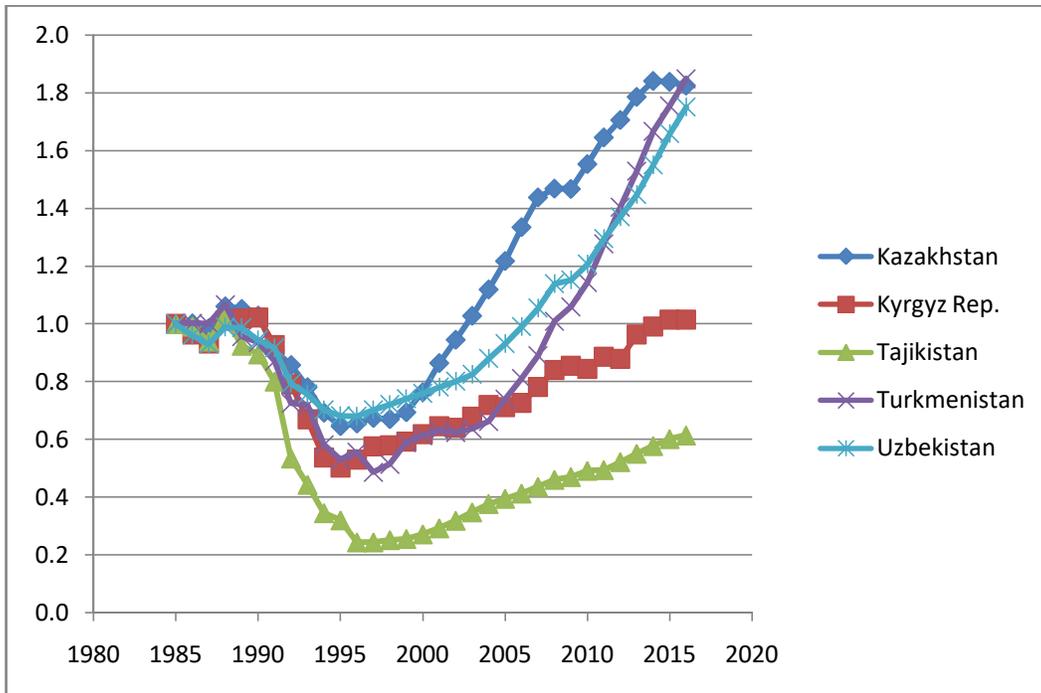


Figure 2.5: Normalized GDP per capita for Central Asia

3.3 Transition versus stagnation, by country

The normalized data and graphs can help us to see which countries eventually recovered their pre-transition levels of GDP per capita, and how long it took them to do so. However, this is insufficient. We cannot simply declare that recovering the pre-transition level represents the mark of success for capitalism, because in the absence of transition, the Soviet-type economies would not have simply remained at their 1985 level of GDP per capita forever. It is reasonable to assume that the GDP growth rate in the last part of the Soviet model period would have continued in the absence of transition. In most cases that growth rate was positive and stable, although low.

In order to properly evaluate the performance of capitalism and compare it with the performance of Soviet-type socialism, we require an estimate of where the countries of Eastern Europe and the former USSR would have been today if they had kept their old economic model. For this purpose, we have constructed a "stagnation path" to estimate per capita GDPs in the 1990s and 2000s in the absence of transition to capitalism. The stagnation path is based on taking the mean growth rate for the years 1980-1988 (or 1985-88 in the case of Slovakia) and projecting this growth rate into the future. The year 1989 was excluded from this calculation because in many countries the effects of transition were already being felt.

The purpose of the stagnation path is to provide an estimate of where the Soviet-type economies might have been today if they did little or nothing to improve themselves – if no major reforms were undertaken. It is intentionally based on the growth performance of

the **worst** decade of Soviet-type socialism. It is not meant to be an estimate of the real potential for growth of the Soviet-type economies. That would require a much more complex model based on the specific conditions of each country. It is possible to imagine scenarios in which successful reforms improved growth rates without abolishing socialism. For instance, the Soviet-type economies could have made use of new computer technology to improve planning, they could have changed the incentive structure for enterprise managers to encourage the adoption of new technologies, they could have abandoned taut planning in order to reduce shortages, and they could have shifted investment away from the traditional priority of heavy industry. It seems unlikely that they would have simply accepted decades of continued stagnation without any attempts to improve economic performance within the Soviet system. However, in a pessimistic scenario, it is possible that all such attempts would have failed. That is another way to look at the stagnation path: as the result of a situation where political leaders are committed to preserving socialism, but it turns out that there is no way to improve performance within (this type of) socialism. In other words, the concept of a stagnation path for Soviet-type economies “continuing without reform” does not necessarily refer to a scenario where no reform is attempted, but rather refers to a scenario where no reform within socialism is successful, and no transition to capitalism is attempted.

In any case, the stagnation path is meant to be deliberately pessimistic, and to set a low bar for the comparison with capitalism. The intention is to provide a minimal baseline: in order for capitalism to be deemed superior to the Soviet model, it should at least be able

to do better than a pessimistic projection of the Soviet model in stagnation. The resulting comparisons, by country, are presented in figures 3.1 - 3.22. Each of these figures displays the estimated trajectory of continued stagnation compared with actual historical data for a given country. The countries are arranged by geographical region as follows: East-Central Europe, ex-Soviet Eastern Europe and Russia, the Baltic states, the South Caucasus, and Central Asia. The vertical axis shows GDP per capita, measured in 2015 constant US dollars.

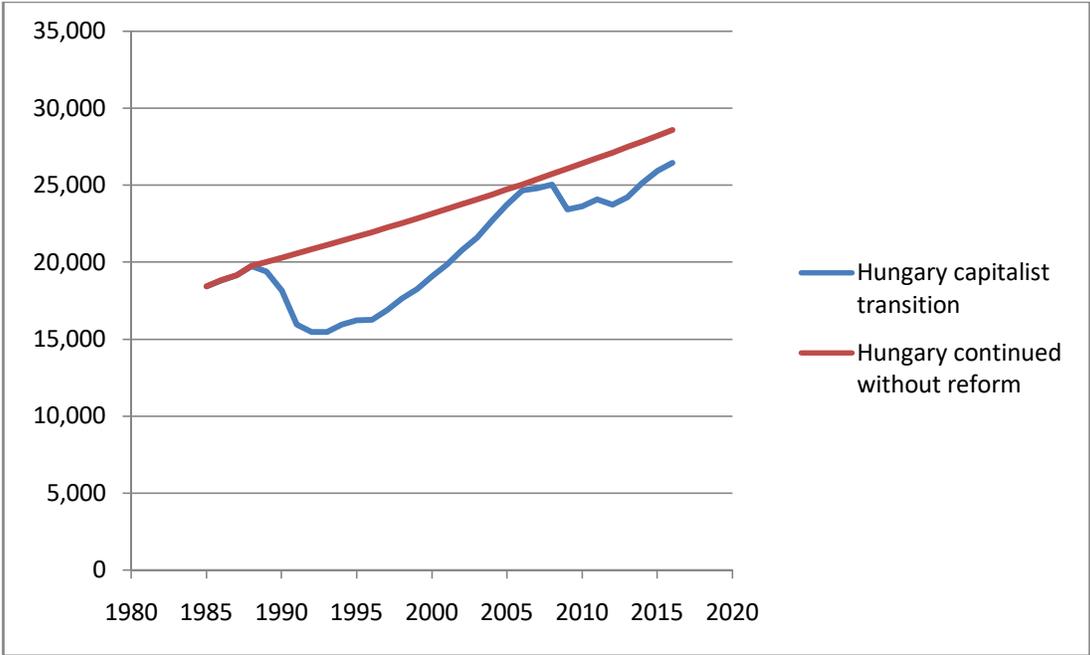


Figure 3.1: Transition vs. stagnation in Hungary

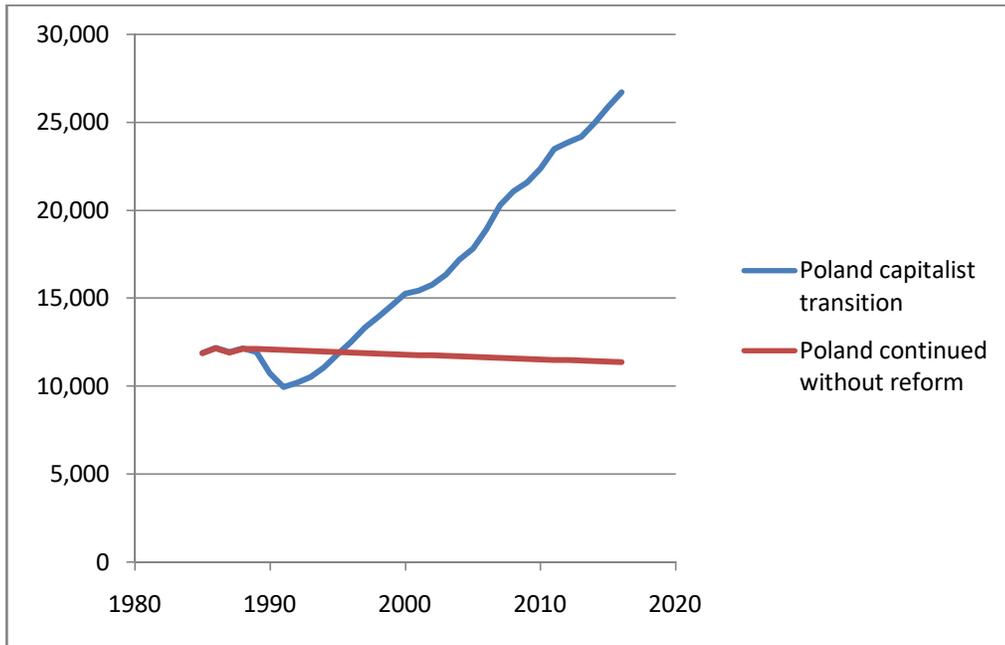


Figure 3.2: Transition vs. stagnation in Poland

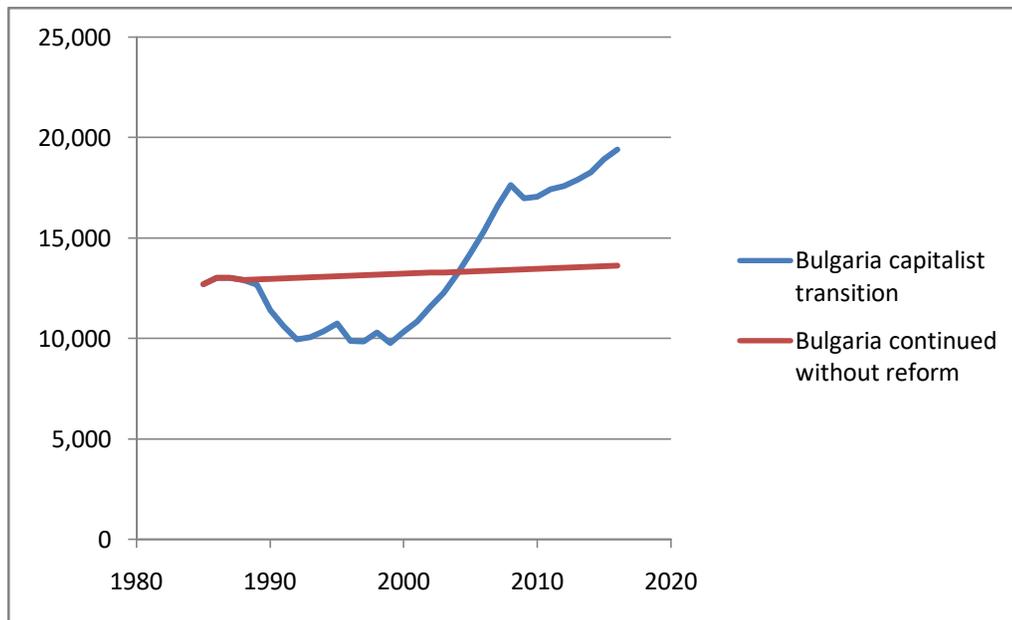


Figure 3.3: Transition vs. stagnation in Bulgaria

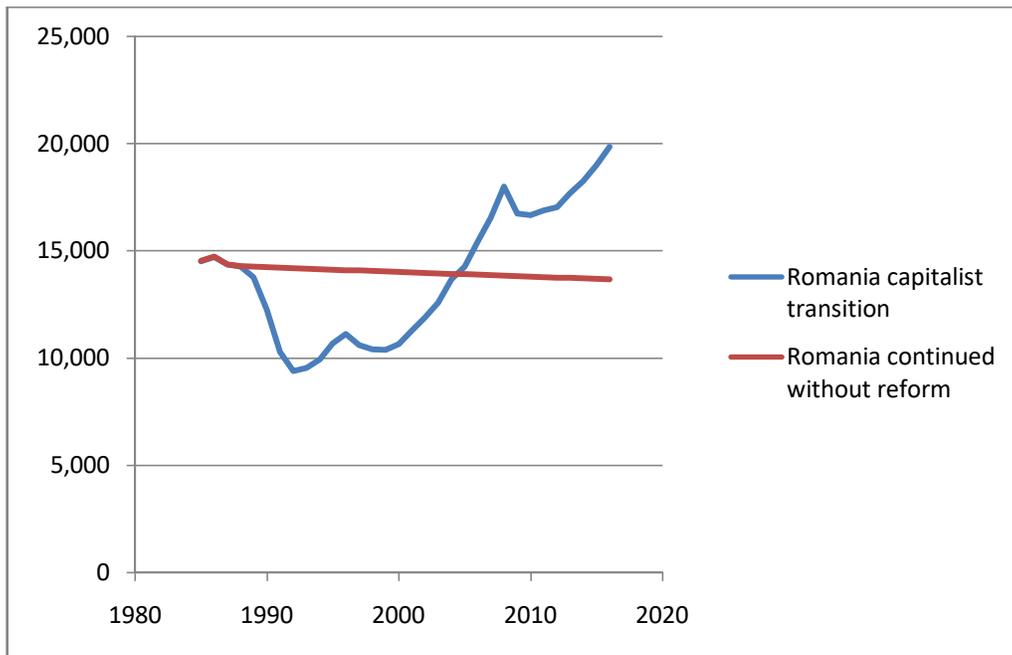


Figure 3.4: Transition vs. stagnation in Romania

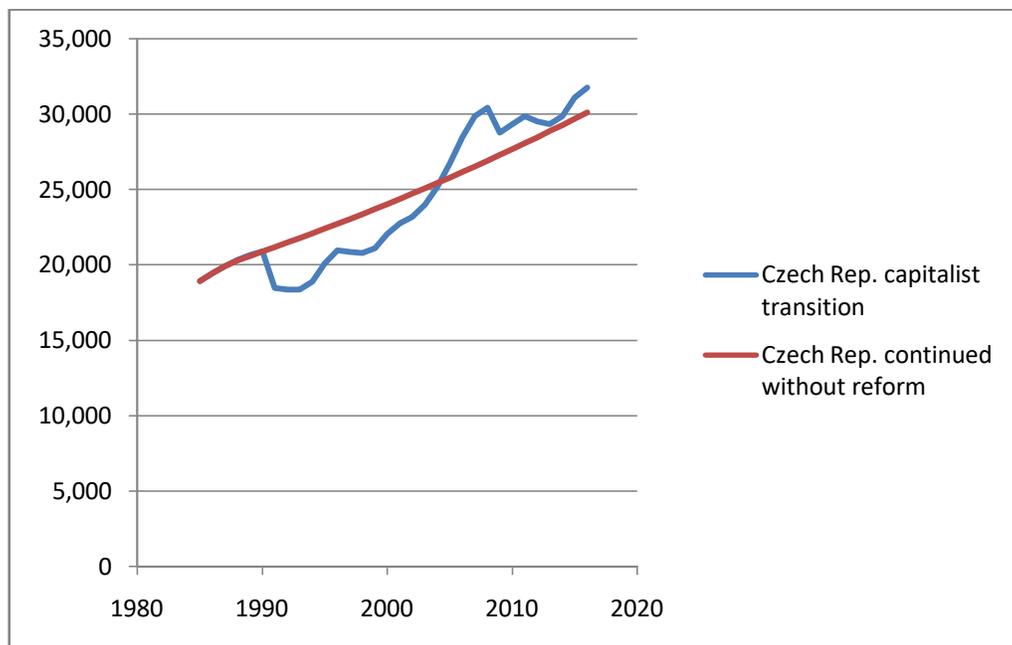


Figure 3.5: Transition vs. stagnation in the Czech Republic

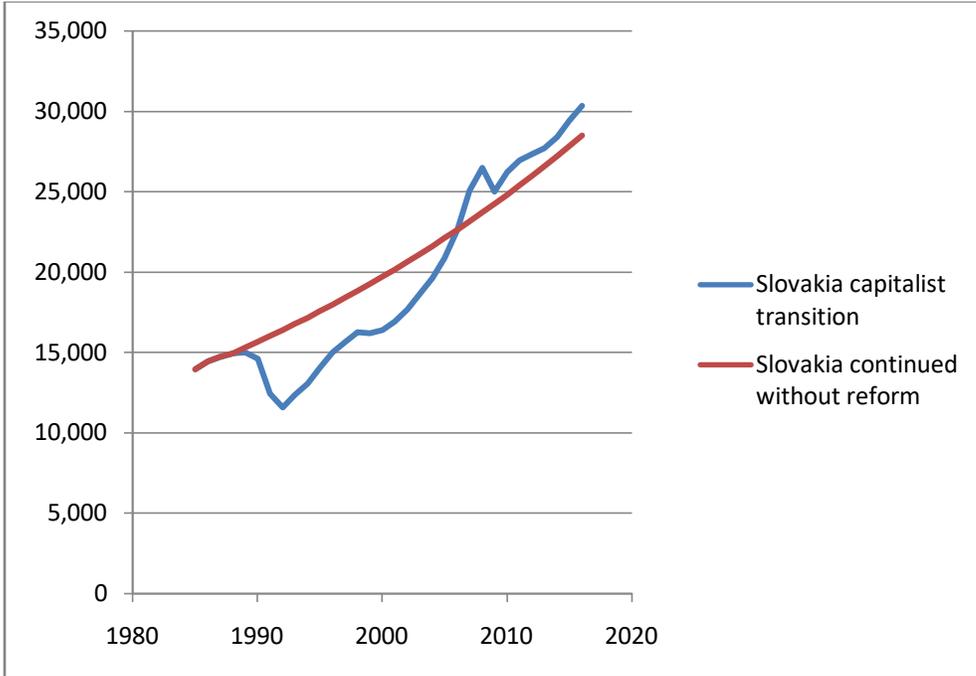


Figure 3.6: Transition vs. stagnation in Slovakia

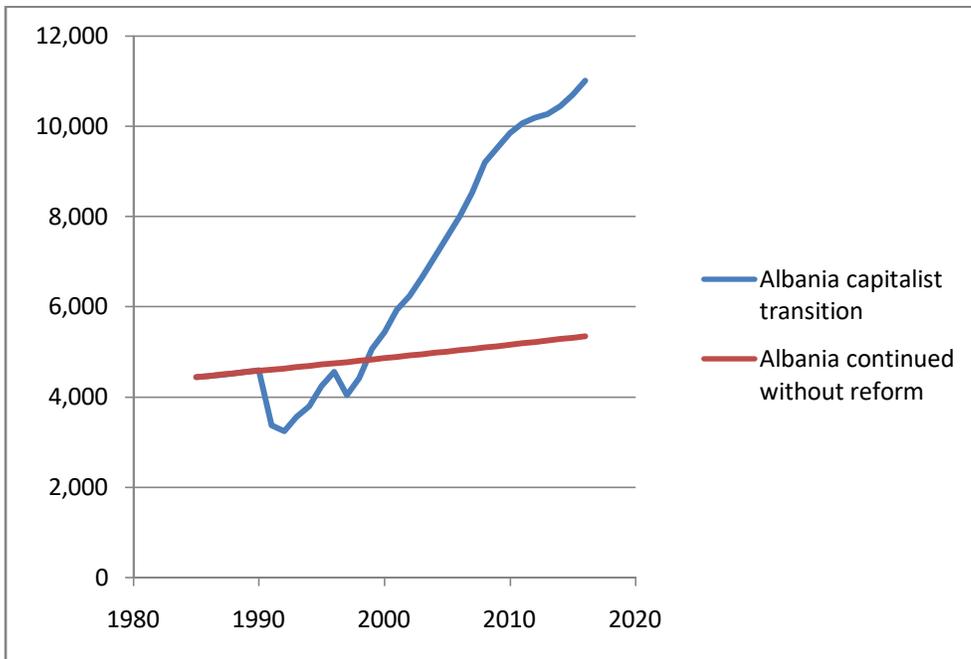


Figure 3.7: Transition vs. stagnation in Albania

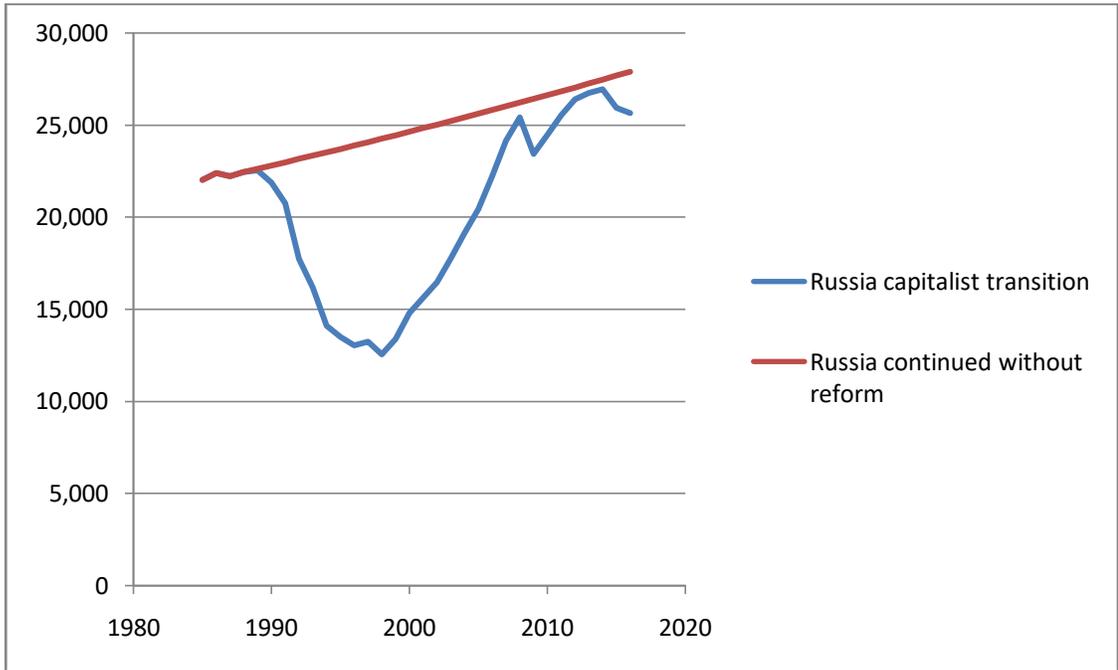


Figure 3.8: Transition vs. stagnation in Russia

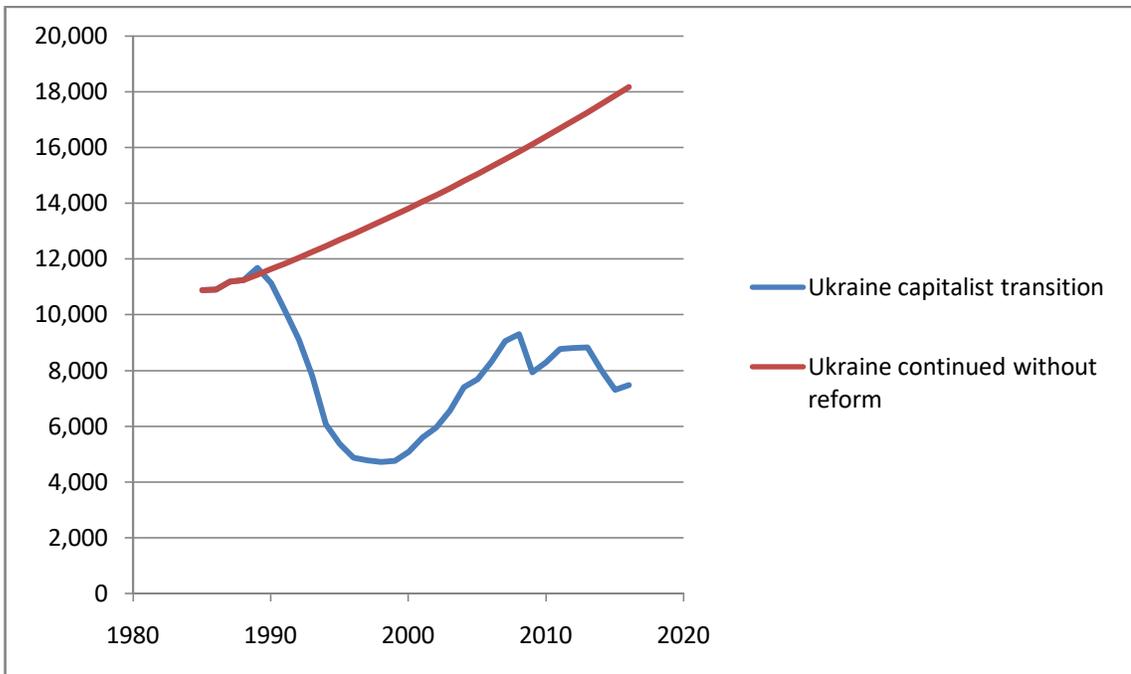


Figure 3.9: Transition vs. stagnation in Ukraine

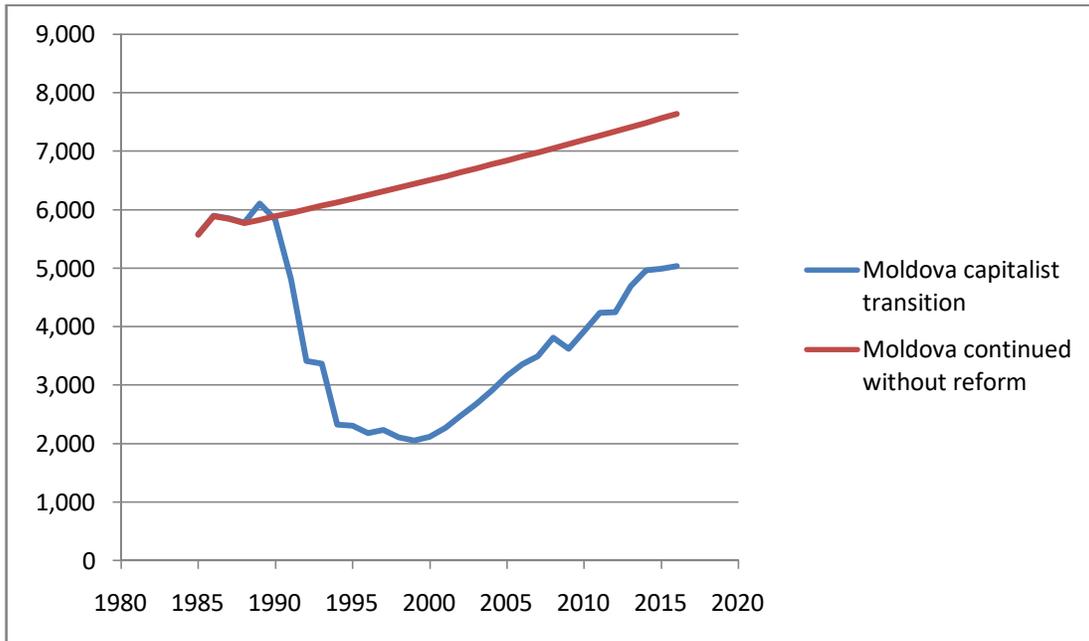


Figure 3.10: Transition vs. stagnation in Moldova

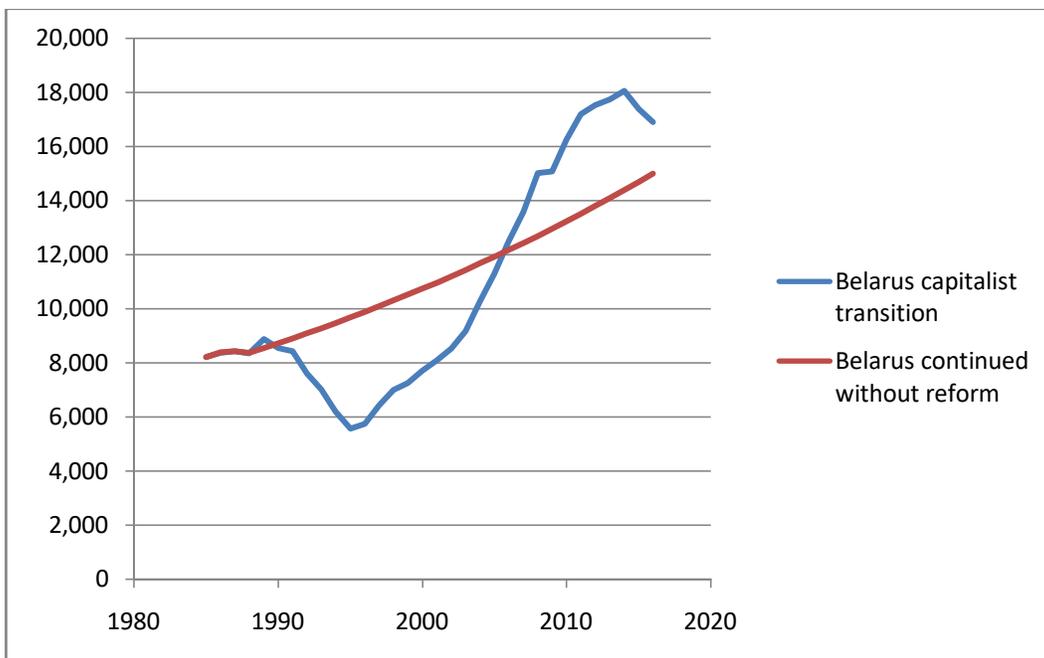


Figure 3.11: Transition vs. stagnation in Belarus

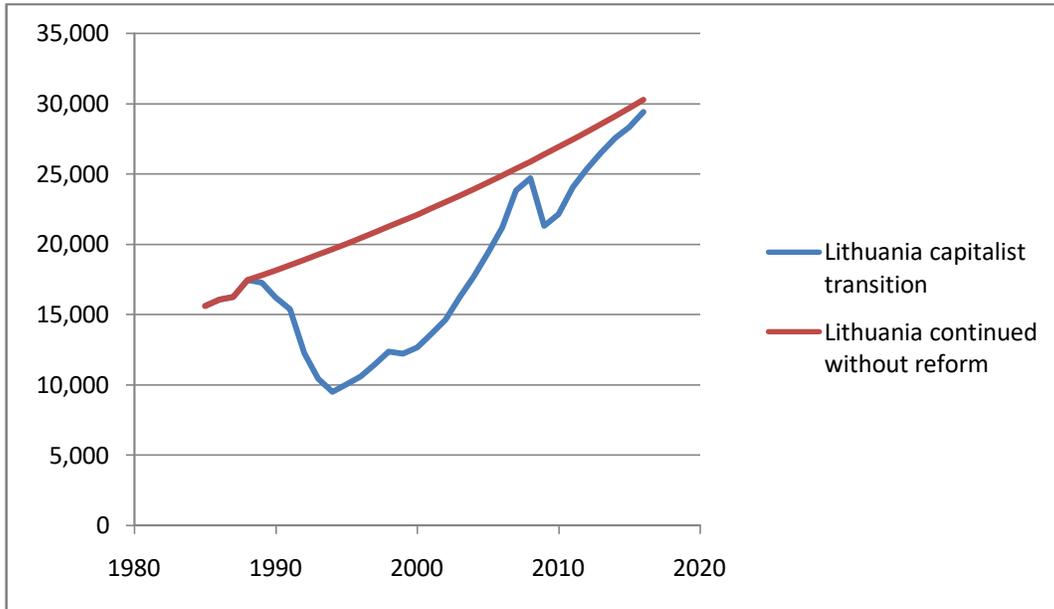


Figure 3.12: Transition vs. stagnation in Lithuania

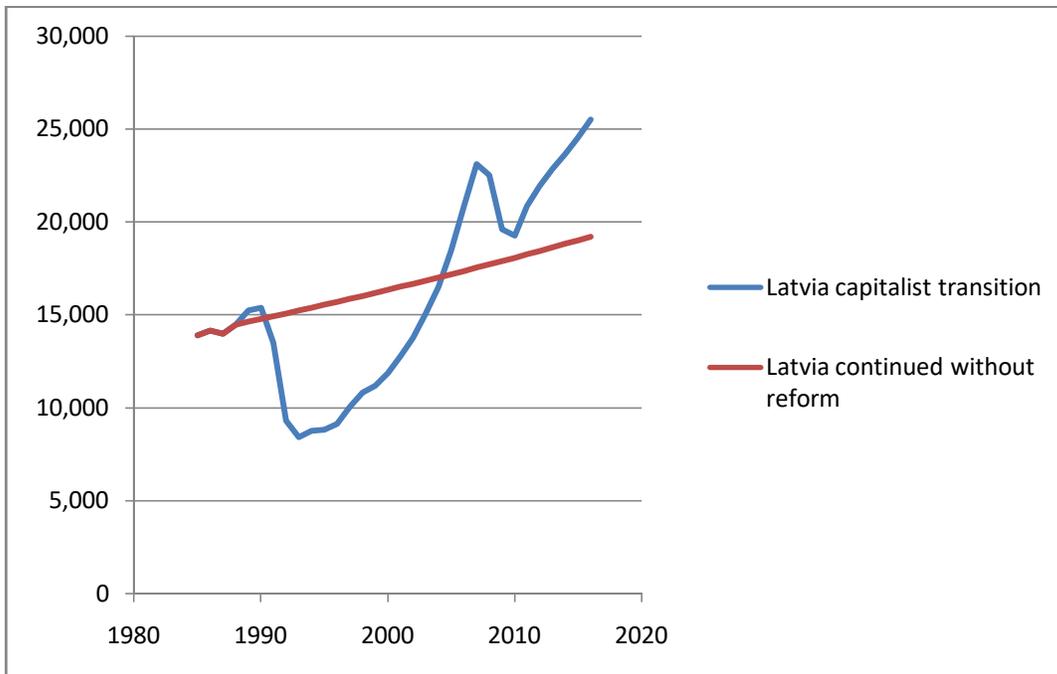


Figure 3.13: Transition vs. stagnation in Latvia

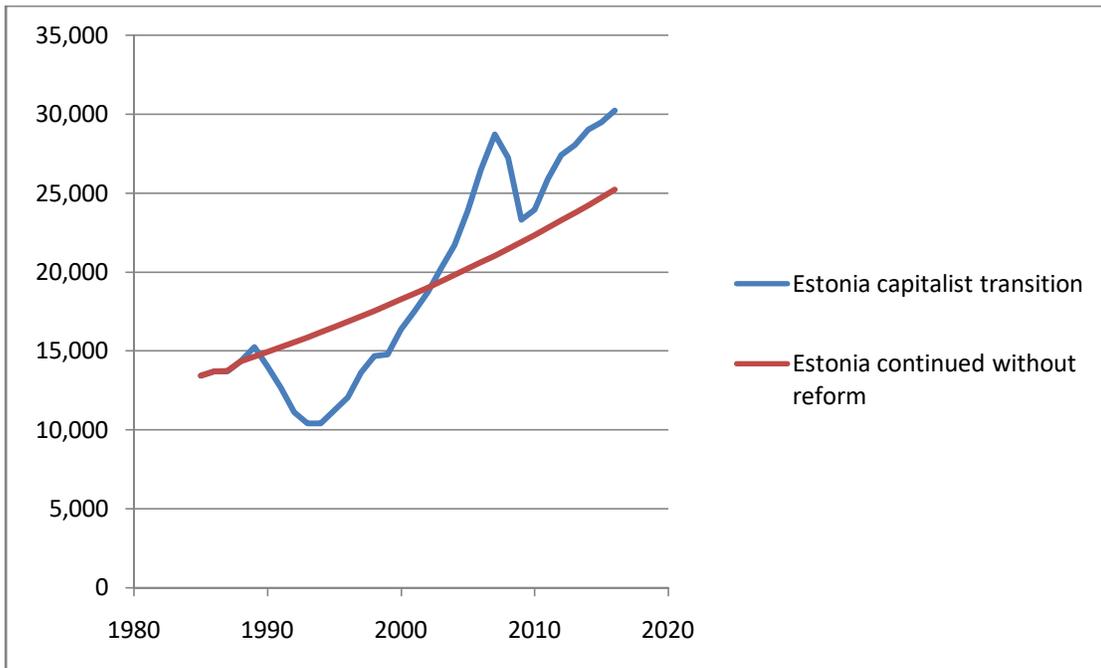


Figure 3.14: Transition vs. stagnation in Estonia

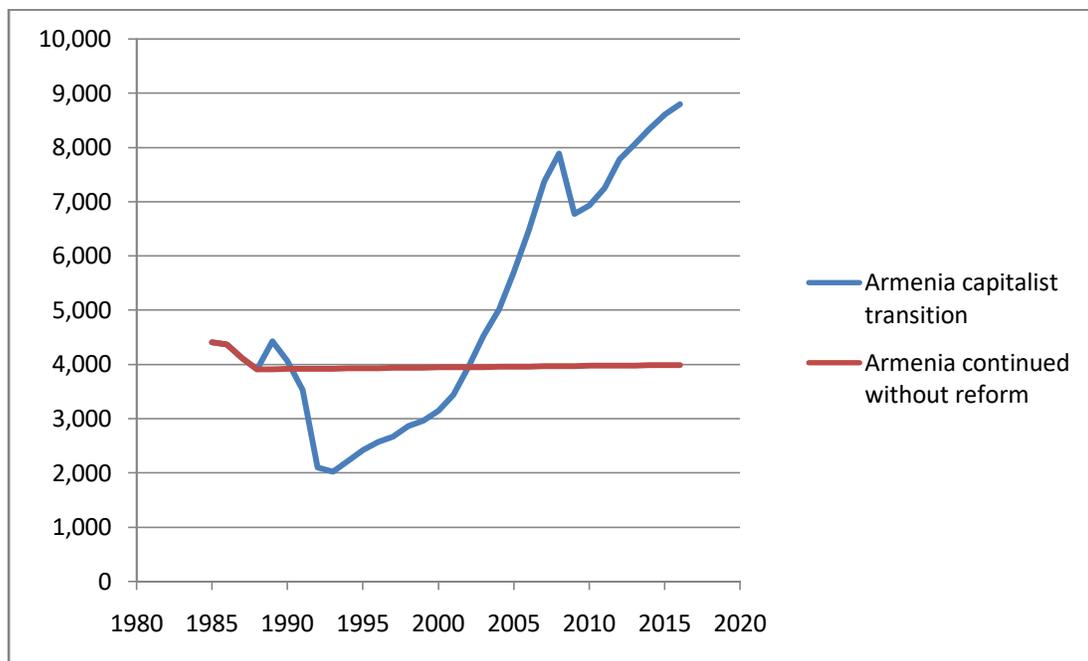


Figure 3.15: Transition vs. stagnation in Armenia

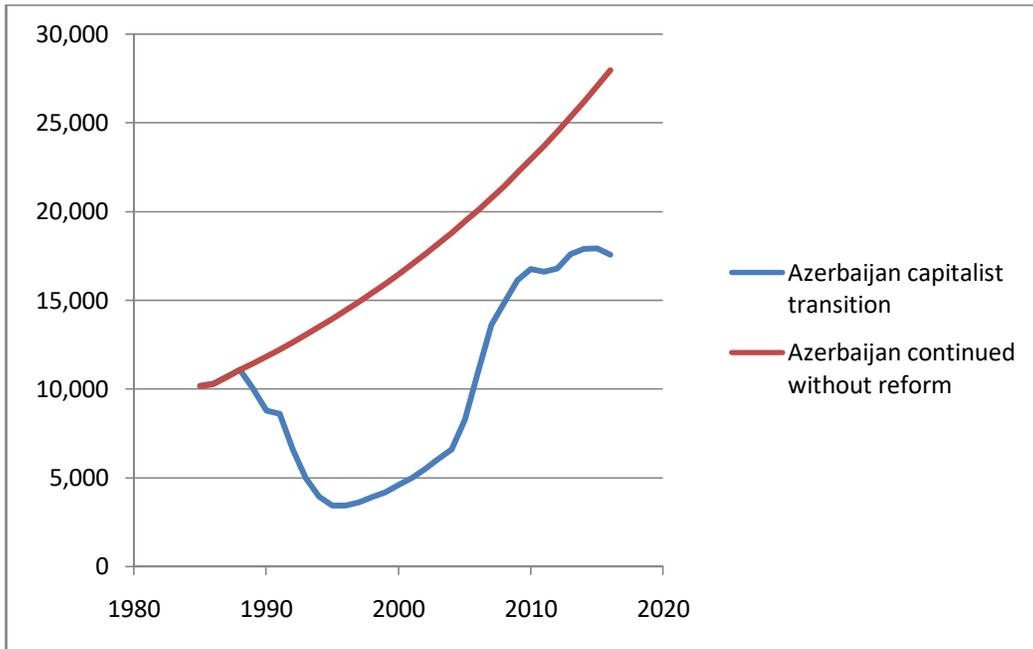


Figure 3.16: Transition vs. stagnation in Azerbaijan

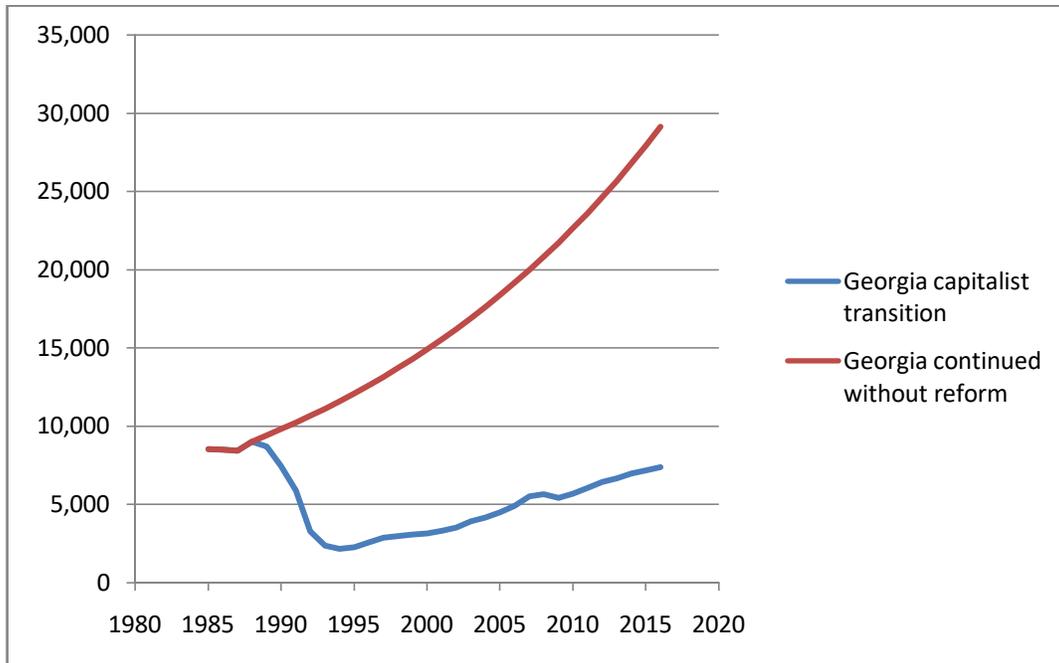


Figure 3.17: Transition vs. stagnation in Georgia

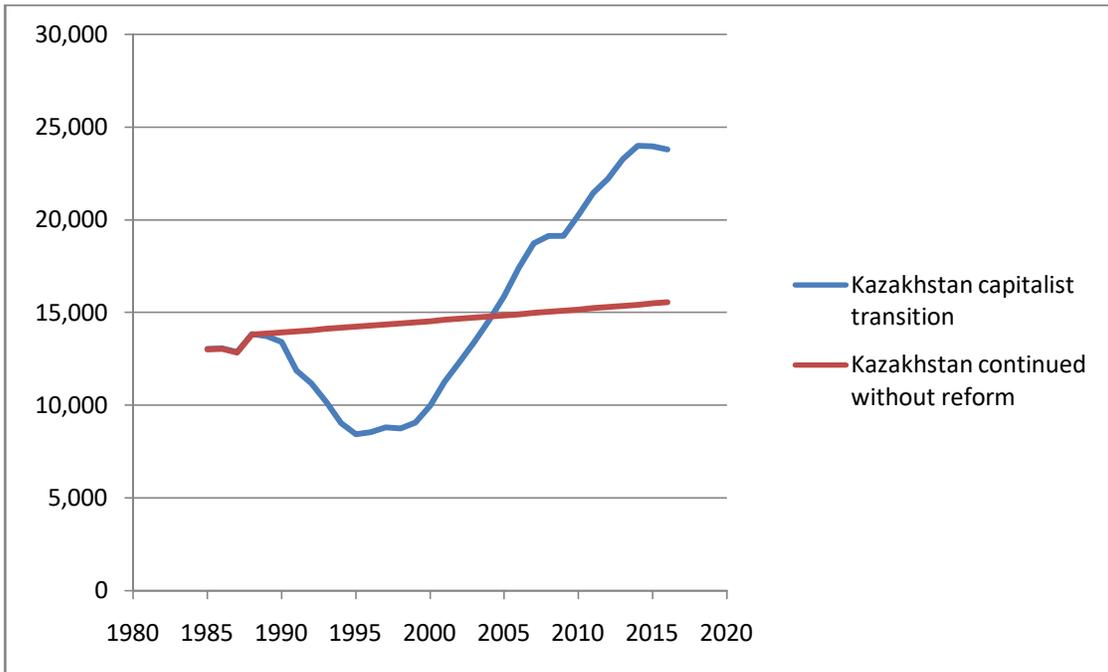


Figure 3.18: Transition vs. stagnation in Kazakhstan

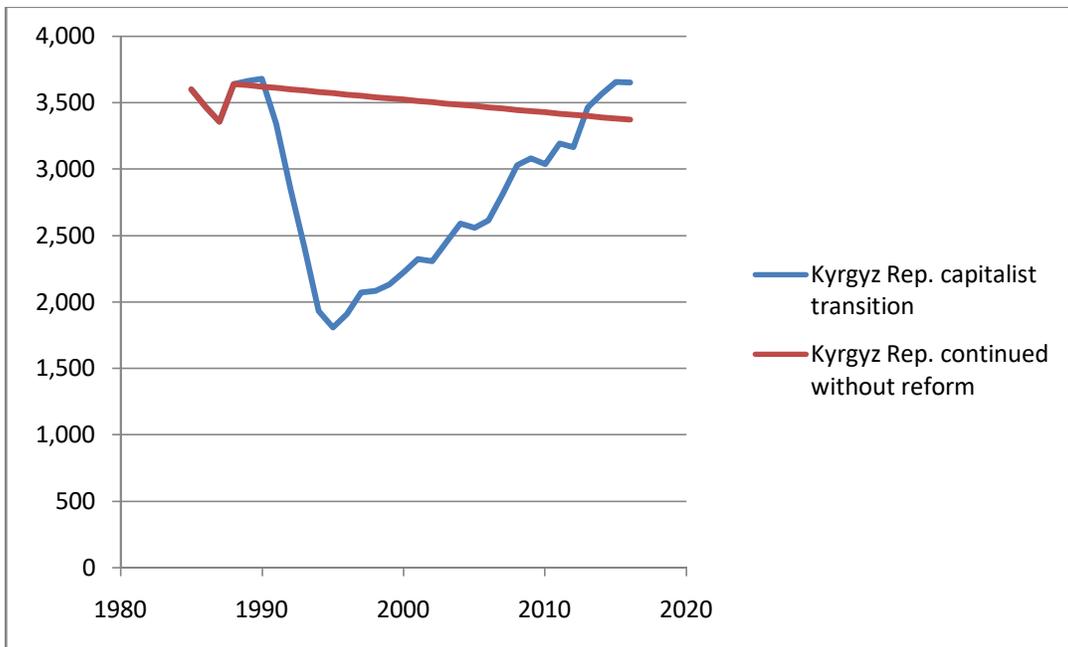


Figure 3.19: Transition vs. stagnation in the Kyrgyz Republic

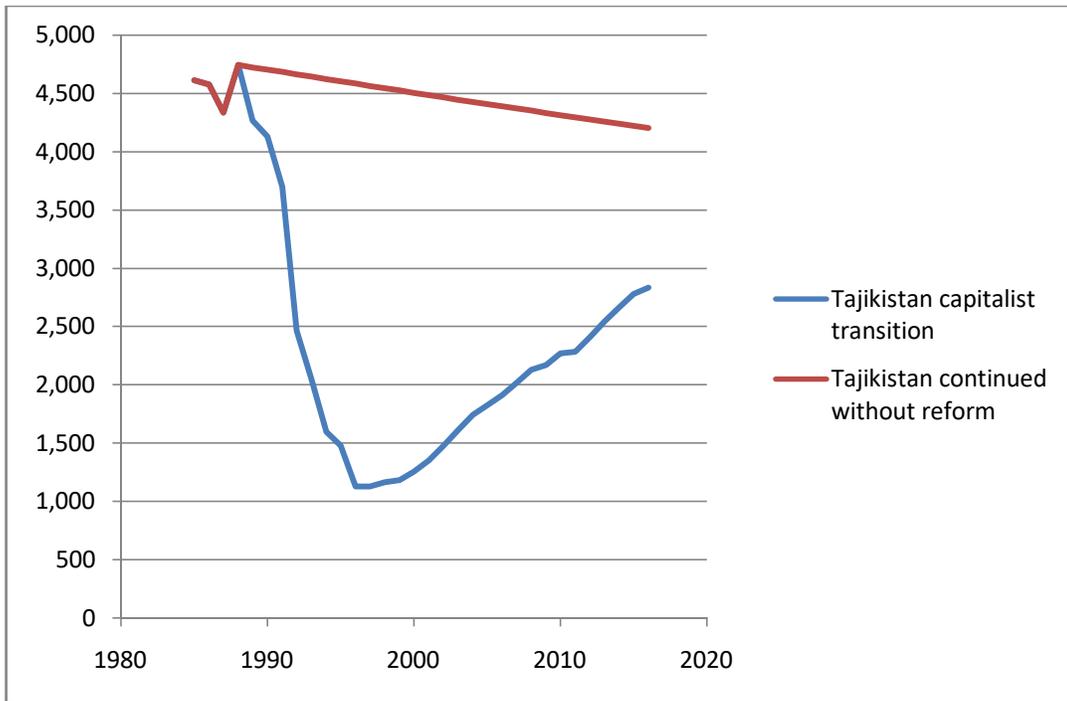


Figure 3.20: Transition vs. stagnation in Tajikistan

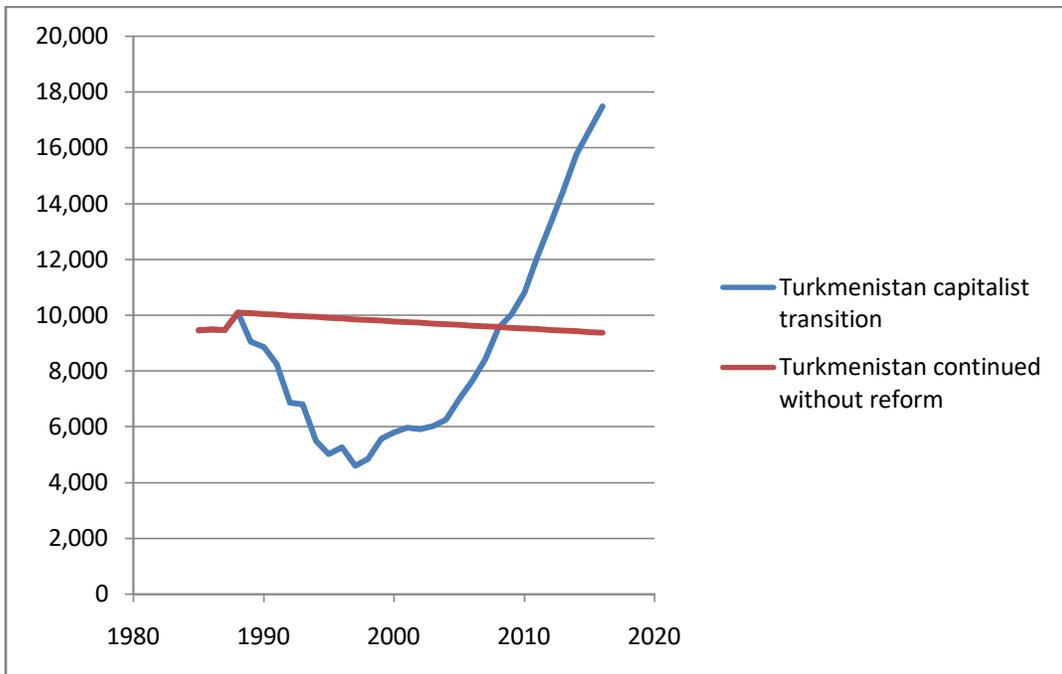


Figure 3.21: Transition vs. stagnation in Turkmenistan

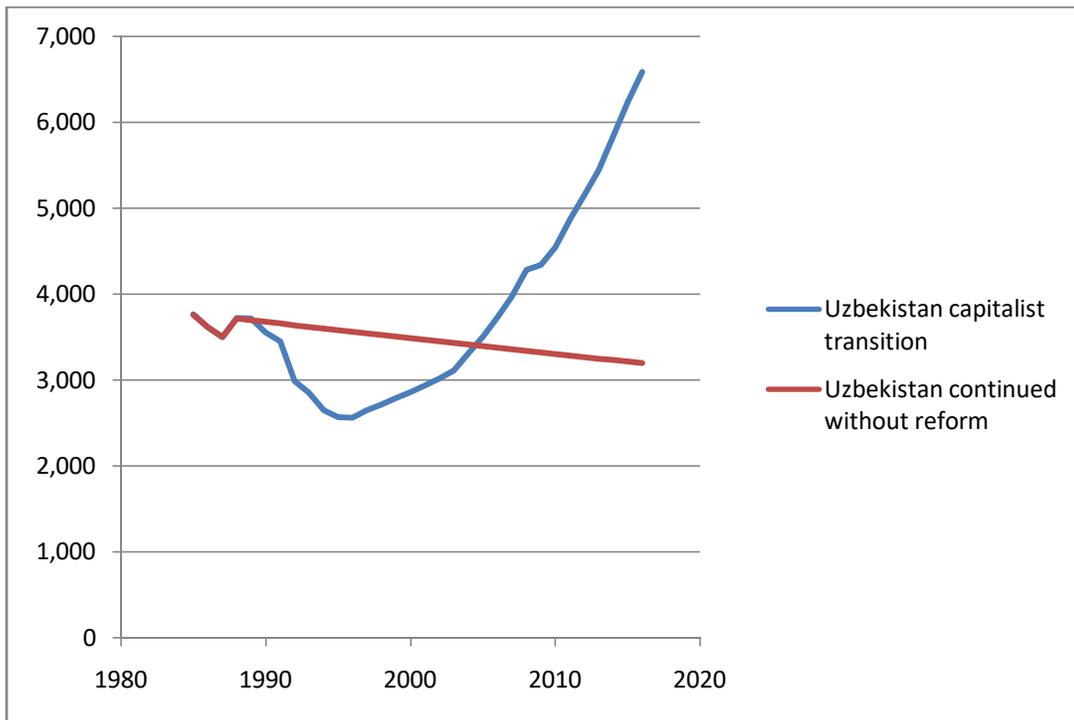


Figure 3.22: Transition vs. stagnation in Uzbekistan

Several things can be observed from this data. First, all of the ex-Soviet republics experienced a dramatic collapse of GDP per capita (and living standards) in the early 1990s. This placed the historical figures for that decade well below the estimated trajectory of continued stagnation, *even in those cases where the estimated trajectory has a negative growth rate*. The immediate aftermath of the collapse of the USSR was certainly far worse than any continued stagnation, or even gradual decline. The countries of East-Central Europe also experienced an early 1990s collapse, but far less severe.

Then, at varying points between the mid-1990s and early 2000s, all of the countries begin to experience a sustained recovery, which places them on an upward trajectory again

(interrupted, for some of them, by the global recession of 2008-09). However, the degree of recovery varies greatly, both compared to the pre-collapse GDP per capita and compared to the estimated trajectory in the absence of transition.

Four countries, all of them ex-SSRs (Ukraine, Moldova, Georgia, Tajikistan) have still not recovered their 1985 levels of GDP per capita as of 2016. The effects of transition in their case can be described as catastrophic: not one, but *three* consecutive lost decades.

Four other countries (Russia, Lithuania, Azerbaijan, Hungary) have surpassed their 1985 levels - in some cases by a considerable margin - but they have not surpassed the stagnation trajectory. In other words, they recovered from the initial collapse, but they did not recover all the way to where they may have been if they did not pursue transition to capitalism in the first place. Thus, the net effect of transition can be considered negative for them. It is noteworthy that this group includes Russia, which is by far the largest of the countries involved in this study, holding over one-third of the total population. What happens to Russia weighs very heavily when it comes to any judgment about whether the transition to capitalism was positive or negative overall.

The remaining fourteen countries have surpassed their stagnation trajectories at various times. Transition provided some benefits for them in the end, at least compared to the alternative of attempting to remain on the course of the 1980s. But not all had the same experience. Some, such as Poland, recovered quickly from a relatively minor collapse in the 1990s and have undergone impressive economic growth since then. Others, like the Kyrgyz Republic, paid an extremely heavy price for their improved trajectory and would

have to maintain their current growth rates for decades before they can say that the benefits of transition outweigh the losses.

There are several different ways to measure “success” (or lack thereof) after the transition to capitalism. One approach is to compare the recent level of GDP per capita with the one suggested by the stagnation path, and see whether a given country is above, below, or very close to where it may have been if it had continued with Soviet-type socialism without reform. Such an approach, however, treats the present day as the “final result” of transition and does not take into account the full experience of the past quarter-century or the costs of transition (which in some cases were staggering). Thus, another approach would be to measure the difference between the stagnation path and actual performance for all of the years since the Soviet model was abandoned, and look at the net gain or net loss over that period.

The following table provides a summary of results using both approaches. A "net gain per capita" is reported in the first column.³ This is the sum of the differences between actual GDP per capita and estimated GDP per capita on the stagnation path, for the years 1989-2016. It can be interpreted as showing how much value was gained (or lost) per capita in a given country over those 27 years. The table is organized in descending order according to this number. The next column lists a "capitalism success index (2016)", which

³ Economic analysis often uses a discount rate to compare gains and losses at different times, but that would not be appropriate here. In this analysis, there is no uncertainty about the future that would make it necessary to discount it. Furthermore, with gains and losses spread out over the entire population of a country, including all age groups and other demographic categories, it is unclear how these gains and losses over time could be weighted.

is the ratio between the actual GDP per capita in 2016 and the estimated GDP per capita for that year on the stagnation trajectory. This shows a snapshot of the situation in each country as of 2016. The "Recovery Year" is the year that a country has surpassed its 1985 level of GDP per capita. The "Crossover Year" is the first year after 1990 when a country has surpassed its stagnation trajectory. Normally, the Recovery Year occurs before the Crossover Year. But that order is reversed in the case of some countries with downward-sloping stagnation trajectories, and in the case of countries with nearly flat stagnation trajectories the years may be the same.

Table 1: Analysis by country

<i>Country</i>	<i>Net Gain per capita (2015 USD)</i>	<i>Capitalism Success Index (2016)</i>	<i>Recovery Year</i>	<i>Crossover Year</i>
Poland	153,174	2.353	1996	1996
Albania	54,089	2.062	1996	1999
Armenia	31,235	2.202	2003	2002
Estonia	13,388	1.198	1997	2003
Kazakhstan	11,734	1.528	2003	2005
Uzbekistan	9,783	2.058	2007	2005
Bulgaria	9,392	1.425	2004	2005

<i>Country</i>	<i>Net Gain per capita (2015 USD)</i>	<i>Capitalism Success Index (2016)</i>	<i>Recovery Year</i>	<i>Crossover Year</i>
Romania	-5,797	1.452	2006	2005
Belarus	-10,326	1.126	2002	2006
Czech Republic	-10,445	1.055	1995	2005
Latvia	-17,129	1.328	2003	2005
Kyrgyz Republic	-20,386	1.082	2015	2013
Turkmenistan	-28,105	1.868	2008	2009
Slovakia	-32,755	1.064	1995	2006
Tajikistan	-65,286	0.674	<i>N/A</i>	<i>N/A</i>
Moldova	-88,712	0.659	<i>N/A</i>	<i>N/A</i>
Hungary	-89,158	0.925	2000	<i>N/A</i>
Russia	-144,783	0.919	2006	<i>N/A</i>
Lithuania	-151,721	0.971	2003	<i>N/A</i>
Ukraine	-196,920	0.411	<i>N/A</i>	<i>N/A</i>
Azerbaijan	-245,006	0.629	2006	<i>N/A</i>
Georgia	-356,052	0.253	<i>N/A</i>	<i>N/A</i>

As can be seen from the table, the net “gain” is overwhelmingly negative. That is to say, over the quarter-century since the beginning of transition to capitalism, the average

citizen of most countries on the list has lost more than he has gained. It is not easy to dismiss this as mere growing pains that will be offset by future benefits from higher growth under capitalism. Twenty-seven years have already passed, and even with optimistic growth estimates, it will take most countries another decade or more simply to break even. Furthermore, several countries on the list, including large ones such as Russia and Ukraine, show no signs of being on a consistent trajectory with radically higher growth rates than the stagnation path, and therefore may not break even at all in the foreseeable future. Ukraine in particular (the second largest country on the list) is still far below its 1985 level of GDP per capita, and has very slim prospects of even recovering pre-transition living standards, let alone surpassing the stagnation path. Russia suffered a lost decade and a half, never exceeded the growth path that could have been expected from continued stagnation, and its growth rates are currently declining.

3.4 Transition versus stagnation in the aggregate

The country-by-country analysis provides useful information, but it distorts the general picture of the outcome of capitalist transition because of the different sizes of the countries involved. As of 2016, the total combined population of all 22 countries in this study was 386.008 million. Of those, 142.36 million (36.9%) lived in Russia, 44.21 million (11.5%) lived in Ukraine, and 38.53 million (10%) lived in Poland. At the other end of the scale, seven countries had a population under five million each. So the great majority of the population is located in a few states, and a general comparison of the transition to

capitalism versus continued stagnation under Soviet-type socialism has to take this into account.

For that purpose, we have aggregated the data from all 22 countries, weighted by population. Because some countries experienced population growth while others experienced population decline over the years involved, the weights are dynamic. For every year, each country is given a weight corresponding to its population in that year. In passing, it is interesting to note that the total combined population of the 22 countries has not changed much over the period under consideration. In 1985 it was 375.56 million, in 1990 it was 387.44 million, and in 2016 it was 386 million. Individual countries, however, show considerable variation.

The following table shows the aggregate GDP per capita for the region represented by the 22 countries, both as it was historically during the years from 1989 to 2016, and as it would have been on the projected stagnation path of the Soviet model. The difference between the two is then listed as the “net gain” from transition (in practice, usually a net loss).

Table 2: Analysis in the aggregate

<i>Year</i>	<i>Actual per capita GDP (capitalist transition)</i>	<i>Projected per capita GDP on the stagnation path</i>	<i>Net gain from transition</i>
1989	15,714	15,829	-115
1990	15,010	15,942	-932
1991	13,891	16,058	-2166
1992	12,237	16,178	-3941
1993	11,382	16,306	-4924
1994	10,330	16,439	-6109
1995	10,138	16,573	-6436
1996	10,023	16,701	-6678
1997	10,201	16,831	-6630
1998	10,058	16,964	-6906
1999	10,495	17,095	-6600
2000	11,291	17,226	-5935
2001	11,882	17,357	-5476
2002	12,457	17,489	-5032
2003	13,304	17,623	-4319
2004	14,294	17,760	-3466
2005	15,197	17,899	-2702

<i>Year</i>	<i>Actual per capita GDP (capitalist transition)</i>	<i>Projected per capita GDP on the stagnation path</i>	<i>Net gain from transition</i>
2006	16,445	18,042	-1596
2007	17,786	18,193	-407
2008	18,641	18,351	291
2009	17,556	18,512	-956
2010	18,226	18,674	-448
2011	18,982	18,838	144
2012	19,449	19,004	446
2013	19,795	19,172	623
2014	20,059	19,345	714
2015	19,870	19,521	350
2016	19,986	19,697	289
		<i>TOTAL</i>	-78,920

Figure 4.1 presents the same data, in the form of a graph:

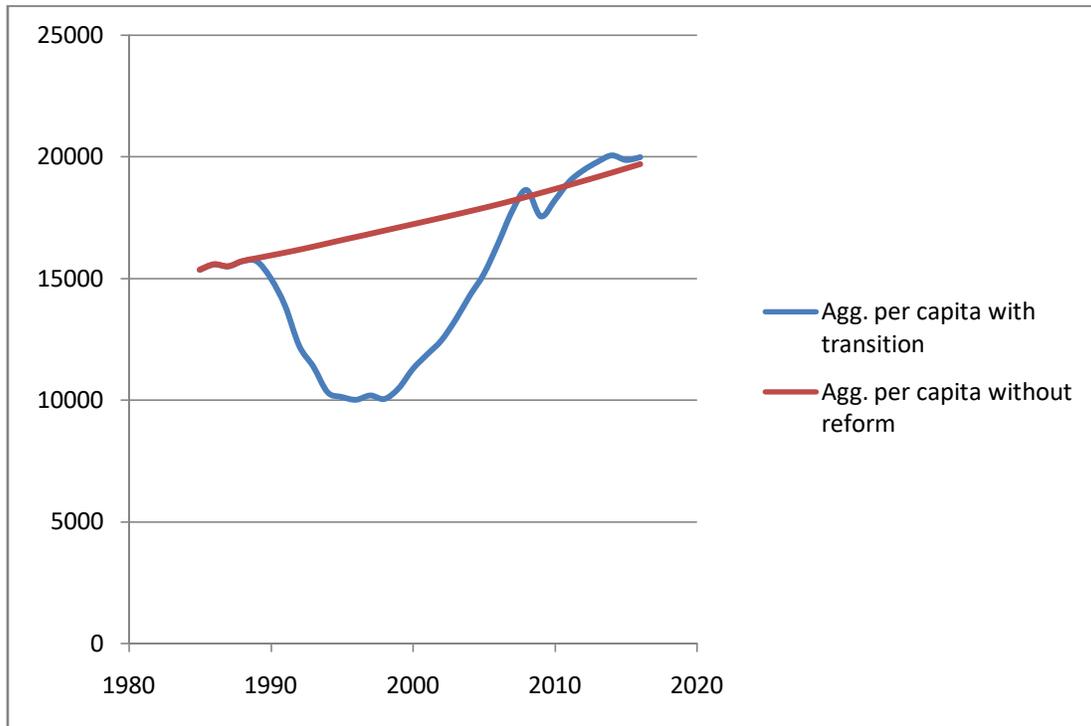


Figure 4.1: Aggregate per capita GDP of all 22 countries

There are two striking facts about this result. First, the size of the total net loss from transition is enormous. Summing up the gains and losses for all the years between 1989 and 2016, the total loss comes out to be \$78,920 per capita (in 2015 USD). Divided over the 28 years in question, this amounts to a loss of \$2,819 per year, per person, on average. The initial per capita GDP of the region was \$15,711 in 1988. So the average citizen of the ex-Soviet and ex-Warsaw Pact countries lost approximately 18% of his annual income due to the transition to capitalism.

Second, there appears to be very little prospect that capitalism might generate the sustained high rates of economic growth that would be necessary to recover this loss in the foreseeable future. There was a decade of high growth from 1998 to 2008, which saw GDP per capita recover from the depths of the depression up to approximately the same level predicted by the stagnation path. That is to say, it returned to where it might have been if Soviet-type socialism had continued without reform. After 2008 there was a brief drop caused by the global effects of the Great Recession, and then there was a return to growth, but not at the pre-2008 rates. The new, lower growth rate has resulted in a performance that tracks the socialist stagnation path quite closely. It seems that, in the end, the economic effect of capitalist transition has been to simply return the region to the long-run path that it was already on in the 1980s, but at tremendous cost.

3.5 Other economic effects of transition

Up to this point, we have focused on a single economic indicator: GDP per capita. That is because it is an indicator commonly used as a proxy for living standards, and because much better data exists for GDP in the Soviet-type economies than for almost any other kind of economic indicator. Furthermore, the stagnation of the 1980s in the Soviet-type economies was primarily a stagnation in terms of GDP growth, and the main promise of capitalism was that it could provide higher GDP growth rates (and thus higher living standards). For all these reasons, our main comparison between capitalism and Soviet-type socialism was done in GDP terms.

However, there are many other indicators that are relevant for welfare comparisons. The available data does not allow us to perform the same analysis with them as we carried out with per capita GDP, but we can at least observe how they changed as a result of the transition from Soviet-type socialism to capitalism. In what follows, we will present data on the Gini coefficient and on unemployment.

3.5.1 Inequality

There are several different sources that estimate the Gini coefficients for income in most of the world's economies, but they rarely provide data on the USSR or Eastern Europe during the period of Soviet-type socialism. Fortunately, the "All the Ginis" dataset, created by Branko Milanovic for the World Bank's Development Research Group, does provide Gini values for those countries, at least near the end of the socialist period (late 1980s). (Milanovic 2014) The data does not cover every year for every country, and for a number of countries in the region there is no data at all, but we can still form a general picture by comparing the available Gini coefficients from the late 1980s to those from the 1990s and 2000s. The following tables show those available Gini coefficients, between the years 1987 and 2007, based on the "All Ginis" dataset from 2013. The dataset draws from several sources and reports a "combined Gini coefficient" based on them. That is the variable shown in these tables. Of the 22 countries in our study, four (Albania, Azerbaijan, Georgia, Tajikistan) have no Gini data at all for the socialist period. As such, they have been excluded from the tables.

Table 3: Gini coefficients (East-Central Europe)

	Bulgaria	Czech Rep.	Hungary	Poland	Romania	Slovakia
1987	20.8		21	24.3		
1988	22	19.0		24.1		19.3
1989	21.7	19.4	24.8	25.2	21.8	18.1
1990	22.6	19.7		24.8	22.9	17.8
1991	23.8	22.4	28.7	24.7	27.1	18
1992	30	21.0	27.8	25	25.5	20.2
1993	33.3	25.9	22.5	26.3		17.8
1994	34.2	22.1	33.2	27.1	32.1	20.8
1995	32.3	21.5	31.5	26.9	31.1	20
1996	36	26.1	31.1	27.2		25.9
1997	36.1	27.6	31.9	28.3	30.4	23.4
1998	34		29.6	32.7	26.9	
1999	33		30.3	32.3	29.4	
2000	33.1	28.1	31.6	34.7	31.3	
2001	33.6		31.2	36	39.5	
2002	35.1	27.0	26.8	33.4	32	
2003	27.2		31.1	34.9	31.5	
2004		27.5	30	35.8	37.5	29.1
2005	29.4	27.5	31	37.9	29.7	27.2
2006		26.9	34.7	35.8	32.1	29.6
2007	28.2	26.7	28.4	34.6	32.1	25.3

Table 4: Gini coefficients (ex-USSR, part 1)

	Russia	Belarus	Ukraine	Moldova	Estonia	Latvia	Lithuania
1988	20.8	20.1	20.1	20	19.9	19.7	19.8
1989							
1990	25.9	23.3	21.4	26.7	24	24	24.8
1991			18.9				
1992	43.4		25.7	34.3	41.2	23.5	30.2
1993	36	20.2		37.2	38.3	24.8	30.8
1994	39.7		42.8		39.6		36.8
1995	45.2	28.6	42.8		37.4	32	
1996	37	26.6	35.1		32.6	32.6	35.7
1997	38.8	28.2	31.4	42.1	33.5	32.6	33.1
1998	37.4	31.1		40.2	34.5	32.1	33.3
1999	36.7	29.7	30	39	34.9	33.1	33.2
2000	44.7	32.2	33.3	38.1	36.2	35.8	33
2001	39.7	29.8	32.7	37.4	37.9		32.4
2002	39.7	27.8	27.8	37.2	39.2	35.4	29.1
2003	40.3		25.8	34.9	36.3	36.4	35.3
2004	40.9	26.6	27.6	35	34.2	35	35.1
2005	40.9	28	27.4	36.3	34	36.4	36.9
2006	41.6	28.7	29.1	36.1	33.7	38.9	35.2
2007	42.3	28.7	29.6	35.3	33.6	35.8	34.2

Table 5: Gini coefficients (ex-USSR, part 2)

	Armenia	Kazakhstan	Kyrgyz Rep.	Turkmenistan	Uzbekistan
1988	26.9	21.3	18.6	18.8	24.2
1989	39.4				
1990	26.9	23.6	22.6	30.8	31.5
1991			18.9		
1992			40.6	24.1	
1993		31.9	42.8	35.1	33.1
1994	60.6				
1995	62.1				
1996	45.7	35.2			
1997	43.1				
1998	39		35.8	42.1	45.0
1999	35				
2000			31.4		28.0
2001	30.4	32.3	35.0		
2002	29.6	37.7	28.7	42.7	32.0
2003	26.2	29.5	28.7	41.1	35.2
2004	25.7	32.3	34.8	41.4	
2005	29.6	27.3	27.9	39.2	
2006	32.8	30.8	38.7		
2007	30.2	30.9	33.4		

In spite of the incomplete data, a clear pattern emerges. The transition to capitalism was accompanied by a substantial rise of income inequality in every single country for which data exists. In some cases the shift was dramatic, as in Russia, where the Gini coefficient grew from 20.8 to 43.4 within four years, and then remained in the range of 36 to 45 for the following decade and a half. Among the other large countries, Poland saw a rise from 24.3 to 34.6, and Ukraine saw a smaller increase from 20.1 to 29.6.

This rise in income inequality means that the costs of transition were not evenly distributed. Lower-income groups were disproportionately affected, and suffered losses greater than the per capita figures calculated in sections 2 and 3. Furthermore, the transition to capitalism caused a permanent shift to higher levels of inequality, not a temporary spike. This means that even in those countries where the per capita costs of transition were later recovered through higher economic growth, the net effect on people with lower incomes may still be negative. And the already bleak prospects for the region as a whole to benefit from the transition to capitalism are even bleaker when we focus on the most vulnerable populations in the region. The transition to capitalism has hurt the average citizen of the region composed of East-Central Europe and the former USSR, but lower income citizens were hurt even more than average. To the extent that the working class is composed of people with lower incomes, we can say that the costs of capitalism were particularly high for the working class.

3.5.2 Unemployment

Soviet-type socialism aimed to guarantee a job to every worker. Advocates of the system stated that the elimination of unemployment was one of its most important goals. The Soviet Union and the socialist countries following its model officially held that this goal had been achieved, and that unemployment did not exist in their economies. For this reason, they did not collect unemployment data. Western analysts, however, argued that there were people in the Soviet-type economies who were, at certain times, willing and able to work, not employed, and actively looking for a job – in other words, people who would

be officially classified as “unemployed” in a capitalist economy. So the Soviet-type economies could be said to have an “unemployment rate”, at least for the purpose of comparison with capitalism. This rate is difficult to estimate, but it was in any case very low.

The 1988 study *Unemployment in the Soviet Union: Evidence from the Soviet Interview Project*, by Paul Gregory and Irwin Collier, estimated the unemployment rate in the USSR in the late 1970s based on interviews conducted with Soviet citizens who had emigrated to the United States. The interviewees were asked questions related to their employment history during the last five years of normal life in the USSR before the emigration decision. There are a number of important findings in the study, but for our purposes the key finding is that the estimated unemployment rate in the USSR in the late 1970s was 1.1 percent. (Gregory and Collier 1988: 617) This methodology is not perfect, but it confirms that the economy of the USSR tended to generate very little unemployment, and we can reasonably expect that the Soviet-type economies of East-Central Europe were not radically different from the USSR in this regard.

Starting with 1991, we have unemployment data provided by the International Labour Organization (2018). This enables us to observe the effects of the transition to capitalism. The data for the twenty-year period from 1991 to 2011 is shown in the tables below for reference. Belarus is excluded due to the unreliability of the official unemployment figures.

Table 6: Unemployment rates under capitalism (East-Central Europe)

	Albania	Bulgaria	Czech Rep.	Hungary	Poland	Romania	Slovakia
1991	22.32	21.24	2.27	9.60	12.53	8.07	12.20
1992	22.65	21.49	3.30	9.94	13.32	8.26	12.60
1993	24.83	21.39	4.32	12.10	14.00	8.24	12.20
1994	24.58	20.17	4.30	10.85	14.44	8.17	13.65
1995	23.86	15.91	4.02	10.17	13.34	8.01	13.11
1996	23.40	13.75	3.89	10.02	12.35	6.74	11.34
1997	23.19	13.70	4.27	8.99	10.96	5.51	11.89
1998	23.03	12.20	5.90	8.93	9.94	5.63	12.19
1999	23.29	14.10	8.49	6.93	12.29	6.24	15.95
2000	22.73	16.22	8.76	6.56	16.31	6.97	19.06
2001	22.68	19.92	7.99	5.67	18.37	6.56	19.38
2002	21.49	18.11	7.02	5.61	19.89	8.11	18.72
2003	20.15	13.73	7.54	5.79	19.37	6.95	17.12
2004	18.82	12.04	8.21	5.83	19.07	7.72	18.60
2005	17.46	10.08	7.93	7.19	17.75	7.17	16.26
2006	16.04	8.95	7.15	7.49	13.84	7.27	13.37
2007	13.50	6.88	5.32	7.41	9.60	6.41	11.14
2008	13.05	5.61	4.39	7.82	7.12	5.79	9.51
2009	13.76	6.82	6.66	10.03	8.17	6.86	12.03
2010	14.20	10.28	7.28	11.17	9.64	6.96	14.38
2011	13.98	11.26	6.71	11.03	9.63	7.18	13.62

Table 7: Unemployment rates under capitalism (ex-USSR, part 1)

	Russia	Ukraine	Moldova	Estonia	Latvia	Lithuania
1991	5.69	5.76	8.47	1.47	18.89	17.79
1992	5.31	5.49	8.18	3.68	18.11	17.05
1993	5.91	5.18	8.27	6.54	19.13	17.39
1994	8.08	5.25	7.39	7.56	21.66	17.33
1995	9.66	5.62	8.45	9.66	20.12	17.54
1996	9.86	7.65	10.86	9.92	20.93	16.40
1997	11.81	8.93	10.94	10.37	14.90	14.13
1998	13.39	11.32	11.02	9.51	14.46	13.71
1999	13.53	11.59	11.13	11.57	13.79	13.39
2000	10.58	11.63	8.47	13.36	14.21	15.93

	Russia	Ukraine	Moldova	Estonia	Latvia	Lithuania
2001	8.98	10.95	7.28	13.13	13.82	16.84
2002	7.92	9.63	6.80	10.03	13.83	13.01
2003	8.23	9.06	7.95	11.29	12.06	12.87
2004	7.78	8.59	8.17	10.25	11.71	10.68
2005	7.17	7.18	7.29	8.03	10.03	8.32
2006	7.16	6.81	7.38	5.91	7.03	5.78
2007	6.10	6.35	5.07	4.59	6.05	4.25
2008	6.32	6.36	3.98	5.45	7.74	5.83
2009	8.42	8.84	6.40	13.55	17.51	13.79
2010	7.37	8.10	7.45	16.71	19.48	17.81
2011	6.54	7.86	6.68	12.33	16.21	15.39

Table 8: Unemployment rates under capitalism (ex-USSR, part 2)

	Armenia	Azerbaijan	Georgia	Kazakhstan
1991	1.98	9.13	10.09	1.14
1992	1.80	7.78	9.40	1.13
1993	5.30	7.79	9.51	1.11
1994	6.60	8.40	10.14	7.54
1995	6.70	8.39	12.05	10.98
1996	9.30	11.54	14.43	12.96
1997	10.80	12.07	14.74	13.00
1998	9.40	11.93	14.55	13.10
1999	11.20	12.28	13.80	13.46
2000	11.94	11.80	10.82	12.75
2001	12.74	10.90	11.16	10.43
2002	13.73	10.00	12.59	9.33
2003	14.53	9.25	11.51	8.78
2004	15.32	8.00	12.62	8.40
2005	16.07	7.30	13.81	8.13
2006	16.83	6.62	13.58	7.79
2007	17.52	6.54	13.28	7.26
2008	17.99	6.05	16.47	6.63
2009	18.74	5.74	16.84	6.55
2010	19.01	5.63	16.30	5.77
2011	18.44	5.42	15.06	5.39

Table 9: Unemployment rates under capitalism (ex-USSR, part 3)

	Kyrgyz Rep.	Tajikistan	Turkmenistan	Uzbekistan
1991	5.49	7.63	2.81	6.55
1992	5.10	6.60	2.47	6.31
1993	5.14	6.86	2.50	6.48
1994	5.25	7.20	2.62	6.41
1995	5.51	7.53	2.75	6.52
1996	7.24	11.28	4.04	8.32
1997	7.40	11.53	4.24	8.27
1998	7.47	11.22	3.98	8.27
1999	7.61	11.67	3.98	8.27
2000	7.50	11.31	3.89	8.28
2001	7.80	11.07	3.82	8.27
2002	12.55	11.46	3.94	8.28
2003	9.92	11.41	3.91	8.29
2004	8.53	11.37	3.92	8.25
2005	8.11	11.19	3.81	8.26
2006	8.27	11.12	3.81	8.26
2007	8.15	11.21	3.83	8.23
2008	8.22	11.13	3.75	8.23
2009	8.41	11.50	3.94	8.22
2010	8.64	11.72	4.00	8.19
2011	8.53	11.16	3.75	8.16

Naturally, different countries have different experiences, ranging from the consistently low unemployment in Turkmenistan to over a decade of double-digit unemployment in Albania or Tajikistan. It is clear, however, that all countries involved – perhaps with the exception of Turkmenistan – experienced significantly higher unemployment under capitalism than would be expected under Soviet-type socialism (i.e. very low single digits). It is also clear that this was a long-term shift and not a temporary effect of the transition. Moving from a centrally planned, Soviet-type economy to a

capitalist economy leads to consistently higher unemployment rates, just as it leads to consistently higher inequality.

The consequences of the transition to capitalism in terms of inequality and unemployment are precisely as expected. In fact, socialism is often criticized precisely for “artificially” suppressing income differentials and keeping unemployment low through job guarantees, both of which are traditionally considered to be policies that reduce efficiency and inhibit economic growth. So a shift to higher inequality and higher unemployment was always expected as one of the costs of greater efficiency and higher growth under capitalism. But, as we have seen, those benefits of capitalism have largely failed to materialize across the region. The former socialist economies paid the expected price in terms of inequality and unemployment, but did not reap the expected benefit in terms of higher living standards.

3.6 Conclusion

Soviet-type socialism (STS) faced a period of stagnation in its final decade, with a lackluster economic performance. It was replaced by capitalism under the belief that capitalism would deliver higher growth rates and better living standards. A few countries did indeed achieve far greater economic growth under capitalism than they could have reasonably expected to achieve under STS. But in the majority of cases the introduction of capitalism brought no net benefit, even a quarter-century later, and even when compared with a pessimistic “stagnation path” that assumes no improvement in the performance of STS after the 1980s. In some cases, including large countries such as Ukraine, the

introduction of capitalism was followed by economic ruin and even a shift to a lower long-run growth trajectory than the “stagnation path”. Russia, the largest of the states that have undergone the transition to capitalism, took over a decade and a half to return to pre-transition levels of income, and never exceeded the growth path that could have been expected from continued stagnation.

When aggregating the data for the entire region, we see that there was an enormously costly transition, with incomes only returning to the levels predicted by the “stagnation path” 20 years after the introduction of capitalism, and after that point capitalism produced a growth trend very similar to the STS stagnation path. Thus, by the performance measures used here, in the region as a whole capitalism has not outperformed socialism. On the contrary, the transition to capitalism appears to have only returned the region to the same long-run trajectory it was following before, at the cost of two lost decades. However, because there are significant differences between individual countries, the transition did deliver net benefits in some cases, with the countries of East-Central Europe generally performing much better than the former Soviet republics under capitalism.

The transition to capitalism also brought a long-term increase in unemployment, and a shift to higher levels of income inequality. As a result, the costs of transition were particularly severe for lower income groups and the working class.

Advocates of capitalism may insist that if success was possible for some of the new capitalist states, such as Poland, then it was possible for all, and the failures are to be

blamed on bad policy rather than any inherent shortcomings of capitalism itself. This may be true. But the same counterfactual argument could be made about STS. A few of the socialist economies, such as Czechoslovakia, were still doing well in the 1980s. Perhaps there existed some policies that could have been adopted by all Soviet-type economies that would have enabled them to return to higher growth without systemic change. However, it is unreasonable to expect an economic system to be judged only by its successes and best-case scenarios. It may be true that best-case capitalism is superior to actually existing STS. But capitalism and STS alike should be evaluated based on their typical, average results in the countries that have tried both of them. "Real socialism" must be compared with "real capitalism" in the same region - not with the best case scenario of capitalism.

And such a comparison, at least when it is based on the ability of the two systems to raise living standards as measured by GDP per capita, does not indicate any clear winner. What this means for "real socialism" is that while it has not succeeded, neither has it failed when compared to the alternative. Contrary to the claims of liberal capitalists, many of the Soviet-type economies were in fact better able to raise living standards than the systems based on markets and private property that replaced them. STS did bring rapid growth for a time in some places. But contrary to the claims of the original Marxist founders of STS, that system did not usher in a new age of abundance. So it did not succeed in meeting the standards that socialists had claimed for it. STS did not provide confirmation for the socialist claim about consistently faster growth than capitalism, or about the possibility of reaching abundance.

It is entirely reasonable to argue, however, that socialism – even the Soviet model of socialism at its lowest performance levels – is able to provide the same average level of prosperity as capitalism. This has been the experience of many countries that have tried both systems, and the overall experience in the region composed of the former USSR and East-Central Europe. So, where does this leave the case for a socialist planned economy in the future? On the one hand, the concerns that a socialist planned economy would be inevitably less efficient than capitalism are probably unfounded. Based on historical precedent, we have reason to believe that a planned economy can achieve results similar to a capitalist one under similar conditions. But on the other hand, the argument that a planned economy could be significantly *more* efficient than a capitalist one appears unfounded as well. Therefore, it does not seem tenable to advocate socialism based on concerns about economic growth or the development of the forces of production. A case for a socialist planned economy can certainly be made, but it would have to be based on concerns about justice, equality, distribution of resources, and long-term sustainability. The primary advantage of socialism in a developed economy is not that it can greatly surpass the speed of capitalist economic growth – as its advocates once argued, and as was the case during the initial industrialization period – but rather that it can potentially create a society that, without sacrificing economic growth, will bring other advantages such as a more egalitarian income distribution, greater individual economic security, and environmental sustainability.

CONCLUSION

In the 21st century, the past of socialism is contentious and the future of socialism is unclear. These two aspects are closely connected. One of the main reasons why the future is unclear is precisely because no consensus has been reached about the past. There is a prevailing sense that *something* went wrong in the 20th century – after all, most of the socialist experiments of that century no longer exist – but there is little agreement as to *what* went wrong and what lessons we are to draw from it.

One widespread view is that 20th century socialism made a grave error when trying to replace the market economy with a planned economy. According to this view, economic planning is inherently inferior to market mechanisms, and a socialist planned economy will inevitably produce lower living standards than a market economy under similar circumstances. The examples of the two Germanies and the two Koreas are often used to illustrate this point.

If this line of thinking were correct, we should expect to see consistently better performances in terms of economic growth and improving living standards after countries transition from a planned economy to a market economy. There are, of course, local factors influencing the performance of each country, including institutions, the level of corruption, and others. Nevertheless, if planning were categorically inferior to markets, transition to a market economy should generally put countries on a superior growth path (with some exceptions, naturally). Yet this is not the pattern that emerges from the data. As we have

seen, while some countries performed better after transition and others performed worse, the general trend was to return to the pre-transition growth path (after paying very high social and economic costs). So, in general, the transition to a market economy did not lead to better economic performance in terms of per capita GDP growth.

That is only true in the aggregate, and there are individual success stories that do not follow the general pattern. Poland performed exceptionally well after its transition to a market economy, for instance. But, even leaving aside the question of whether the Polish experience could have been replicated elsewhere, *individual* success stories do not prove a *general* superiority of market economies over planned economies (and likewise, individual cases where planning performed much better than markets, as in Ukraine, do not prove the opposite). In general, the performance of planned economies and market economies in East-Central Europe and the ex-USSR is similar enough that we cannot say which system is superior based on historical experience alone.

This is an argument against the dismissal of socialist economic planning that has become a part of conventional wisdom after the end of the Cold War. Economic planning is *not* inherently inferior to market mechanisms, and a socialist planned economy will *not* necessarily produce lower living standards than a market economy under similar circumstances.

However, if market economies and planned economies can achieve similar economic growth, that is not by itself a strong argument *for* future models of socialism to be based on economic planning. After all, several different models of market socialism

have also been proposed, and their proponents claim that these models can achieve the main goals of socialism – goals revolving around economic equality, social justice, an equitable distribution of resources and environmental sustainability – in the context of a market economy. Why should socialists prefer planning instead of markets, if both are viable options?

One reason to prefer planning is because a planned economy can achieve one goal of socialism that market-based systems cannot achieve: the abolition of exploitation. Market socialism, like all market economies, would require some type of atomized ownership of the means of production. That is to say, different workplaces would have to be owned or controlled by different economic agents, with opposing interests, engaged in profit-seeking behavior. The economic agents in question would not be individual capitalists, and workplaces would not legally allow capitalist wage labor contracts to exist. Nevertheless, capitalist relations of production would re-emerge in practice, if not between individuals then between collective economic agents (for example, between one co-op and other co-ops). As long as ownership of the means of production is atomized – as long as different economic agents have separate control over different means of production – some agents will control more valuable productive property than others, and they will be able to use this to exploit those others (especially if the others control no means of production at all, for example a co-op that must rent its workplace and machinery). Even if individuals cannot exploit other individuals, there will be groups that can exploit other groups.

In order for a society to be free of exploitation, it cannot allow ownership or control of the means of production by independent profit-seeking agents. This means that it cannot have a market economy. Therefore, to the extent that the abolition of exploitation is a significant goal of socialism, future models of socialism ought to be based on economic planning.

Any such future model of socialist economic planning should also draw lessons from the 20th century and expect to face some of the same dilemmas that confronted socialist planned economies in the past. One of these dilemmas, the tradeoff between innovation and job security, is likely to appear in every planned economy regardless of the level of democracy accompanying it. This is not a fatal flaw, but it is a source of potential problems.

The tradeoff arises from the fact that technological progress inevitably renders certain jobs obsolete. In fact, entire workplaces and sometimes even entire industries have to be closed down as better technology becomes available. This will disrupt the lives of the workers performing the jobs that are no longer needed. Even if unemployment does not exist (in other words, even if those workers are immediately offered new jobs elsewhere), the loss of their old employment is likely to impact them negatively. Therefore, in a planned economy, there may be popular pressure pushing in a technologically conservative direction. And this, in turn, can result in a slower rate of technological progress, which would put socialism at a disadvantage compared to rival capitalist societies.

There are many possible ways to respond to this potential problem. One option is to do nothing at all, and accept that if the population democratically decides to forgo certain innovations for the sake of preserving certain jobs, that is simply the correct course of action. The fact that economic planning allows a democratic decision to be made on this matter may even be regarded as one of the advantages of socialism. Capitalism does not allow anyone to choose between pursuing innovation and preserving existing jobs. The logic of the system compels capitalist firms to take the side of pursuing innovation every time.

Nevertheless, the fact remains that choosing to preserve certain jobs at the cost of not implementing certain innovations would make socialism lag behind capitalism in technological development. This may not be a problem if there are no advanced capitalist societies acting as rivals to the socialist society, but we cannot rely on random chance to provide favorable international circumstances.

If the international circumstances are not favorable and advanced capitalist rivals exist, the socialist society will need to find ways of promoting technological innovation in spite of its negative impact on job stability. Options for doing this include: Providing generous compensation packages to workers who have to switch jobs such that they do not regard the loss of their old job as a net negative, keeping job stability as the general rule but allowing for exceptions in specific industries, and importing particularly desirable new products while only gradually introducing domestic production of them.

It is not possible to guess in advance all the challenges that may be faced by future socialist societies, nor is it possible to know what model they might choose to pursue and how it will differ from 20th century socialist experiments. However, a careful look at the socialism of the past can help inform the socialism of the future. A planned economy remains viable and desirable if we wish to overcome exploitation, but may face technologically conservative pressures.

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