

Economics of Transition

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1. Introduction

The transition from socially planned economies towards market economies, as has happened in the countries of Central Europe, Eastern Europe and the Former Soviet Union so distinctively during the last decade, can be considered one of the major economic developments of the last century. The key challenges of transition, according to the Washington consensus, are reforms in the field of Liberalization, Privatization and Stabilization. With liberalization is mainly meant freeing the prices, domestic and foreign trade and investments and elimination of state control (as in liberalizing markets). Privatization mainly involves privatizing of state owned firms and property. Stabilization is focusing on macro-economic factors, as for instance reducing inflation and unemployment, and balancing the national accounts.

More recently two important aspects are often added to these 3 key challenges of transition, being Institutionalization and Social Norms. The first years of transition these two aspects were not considered as main priorities, but currently both the transformation of institutions and the social norms of the society are considered crucial for a successful shift to a market economy.

In this summary I will focus on 2 main aspects of transition economies, being the choice of transition reform strategy and the importance of soft budget constraints during the reform period.²

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² *Transition report 1999* (EBRD, 2000), Zecchini (1997).

2. Big bang or gradual reforms

2.1 The 2 main reform strategies: shock and gradual reforms

At the start of transition, countries were facing the difficult choice to decide on what reform strategies to follow. No country had at that time undergone such a swift and all-compassing regime change as the one they were facing from a socialist to a market economy. The only comparable event would probably be their own changes during the shift from market economies to socialist economies in the early 1900's and after the Second World War. As such there was no clear example on how to order the reforms and at what speed. Also no expertise was available at national or international level to guide the transition process.

After a decade of transition can be concluded that 2 different approaches of reform were dominating, being the big bang or shock approach and the gradualist approach. The shock approach (or all out approach) aims at transforming the whole economy in one wave of reforms, including aspects like price and trade liberalization, opening up markets, privatizing state owned firms and imposing stabilization policies to control inflation. The basic idea of the shock approach is to minimize the time of reform, reshape the country quick so it can start growing and become productive again. This way the disadvantages and loss of the reforms by the population are kept moderate, and reforms are undertaken while there is still a significant support for them among the population. A shock approach does not mean all reforms are done quickly. Several reforms are always long-term reforms, but the initial starts of the reforms are all at the same time. Poland is one of the countries that followed a rapid reform process in 1990, as well as East Germany and several NIS states (Newly Independent States).

The gradual approach or piecemeal approach starts with smaller scale reforms that are expanded once they have proven successful. A few necessary but hard reforms will be taken immediately, but afterwards the reform will be a slowly ongoing process. The basic idea of the gradualist way of thinking is to spread the reforms over time, and as such also limit the negative effects of the reforms for the population. The main example of a gradualist reforming country is China, and less distinctive examples are Hungary and Slovenia³.

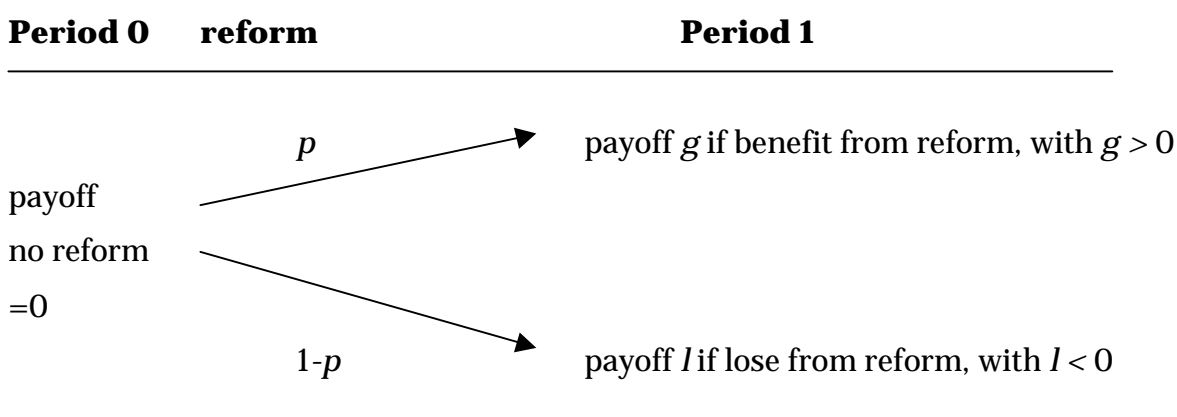
³ *Transition report 1999* (EBRD, 2000)

The split up of countries in gradual or big bang approach is not as clear-cut as it might seem. For example Poland that is mentioned often as an example of a country that opted for a big bang approach has also implemented some gradual reforms in specific areas. And the gradual reformers in Europe did liberalize their whole economies at once, which is characteristic for a shock approach. The choice of following either one of the approaches depends on many factors, such as timing of the first reforms (those countries that started reforming before 1989 chose a gradual approach), political support of the reforms and economical situation at the start of transition.

2.2 Reform under uncertainty: a model

The choice options whether or not to engage in reform, can be described using a 2 period model⁴. Ex-ante people can accept or reject reforms. The payoff of the reform is equal to g , with $g > 0$, when the reform is positive for an individual. If a reform has negative consequence, the payoff is equal to l , with $l < 0$. In general the population will favor the reforms ex-post if the population benefiting of the reform p is larger than the population with negative outcome $(1-p)$ ⁵. However, people are assumed to be risk-neutral ex-ante and with no reform the payoff is assumed to equal 0. So ex-ante people will only vote in favor of reform as long as the discounted expected payoff in total $(1-d)(pg + (1-p)l) > 0$, where d is the discount rate. This situation is visualized in figure 1

Figure 1:



⁴ Fernandez and Rodrik (1991).

⁵ According to majority voting the population will favor reform ex-post if $p > 1/2$.

The next extension of the model is the inclusion of a cost of reform reversal. At time $t=0$ the population will have to decide in favor or against a reform. But in addition, at time $t=1$ the population is assumed to vote whether or not they would like to reverse the reforms. The costs of reform reversal will equal E , with $E > I$. This is known ex-ante, and will influence the voting behavior of the population negatively. Instead of comparing the expected payoff of reform $pg + (1-p)I$ with the status qua payoff of 0 (no reform), they will now compare it with the costs of reform reversal. The population will only vote in favor of reform if the discounted expected payoff of reform $(1-d)(pg + (1-p)I) > E$.

According to Roland and Dewatripont (1995)⁶ this bias against reform might be solved by means of a gradual reform strategy. In a big bang approach, all reforms start at the same time, assuming the final results will be beneficial for the whole economy. The advantages are that there are certain complementarities of the reform⁷, so the payoff from all reforms together will be higher than the sum of the payoffs of all separate reforms. However, the costs of reversal are also higher than under gradualist reforms, and there is no possibility to learn from previous reforms. Besides, the losers from the reform will suffer a lot during the period of reform.

When opting for a gradual reform process, the country implicitly chooses for a smaller (or even negative) payoff and also delays several reforms, which is considered negative. However, it does hold the option to reverse the reforms at an early stage if the first reforms are not considered positive, and in that case the costs of this reversal are still relatively low. Besides, the country has the possibility to learn from the gradual reforms, which influences the payoff positively, and the negative consequences of reforms are limited and spread over a longer period of time.

So basically gradualism can be more optimal, as long as the information obtained from the first reforms and the option value of waiting exceed the loss of complementarities and the reversal costs of the partial reforms are low. On the other hand a negative consequence is that several unpopular reforms might not be undertaken under

⁶ Roland and Dewatripont (1995).

⁷ For example institutions need to build up only once, all votes can be included in one voting round, and information provision can include information of all reforms at once.

gradualism, that would have passed when they would have been included in a big bang reform package⁸.

2.3 Strategies of sequencing reforms: an example

Considering all these factors that are influencing whether or not a reform or reform package is accepted, it is reasonable to understand there are several political strategic ways to best implement reforms. Assume there are 2 reforms, and there are winners and losers of both reforms. As long as there are no complementarities, and no reversal costs, both shock and gradual reforms will continue as long as the expected payoff exceeds 0. When there are reversal costs and no complementarities, a big bang reform package will only be accepted if they expected payoffs of all reforms exceed the reversal costs. The same goes for a gradual approach, though in that case the reversal costs are significantly lower, which results in a higher probability the gradual reforms are accepted than the shock reforms. When there are no reversal costs, but there are complementarities, a gradual approach is always inferior to a big bang approach, due to the loss of complementarities. When there are both complementarities and reversal costs, several scenarios are possible. These scenarios are explained in the following example:

There are 2 independent reforms: 1 and 2. There is a probability p for an individual to gain in each reform, and of $(1-p)$ that it will lose in the reform. The reversal costs equal E , and the complementarities equal y . The payoffs, ex-ante, will be divided as follows:

	gain reform1	lose reform 1	gain reform 2	lose reform 2
payoff amount	g	$-2g$	$2g$	$-g$
proportion of the population that will receive that payoff	$2/3$	$1/3$	$1/3$	$2/3$

In a big bang approach, the reforms will be accepted as long as the total payoff exceeds the reversion costs. In this example that is the case as long as $-y > -E^9$. With gradual reforms, with majority voting, the situation depends on the sequencing of reform. If reform 1 is first implemented, 2/3 of the population will have gained from that

⁸ Mathematically the trade off can be modeled. This is extensively described in Roland and Dewatripont (1995).

reform and will vote for continuation as long as the expected payoff from the second reform exceed the cost of reversal, which is as $0 > -E^{10}$. 1/3 Of the population lost from reform 1, and might vote for reversal if the loss from the reform plus their expected payoff from reform 2 is still resulting in a bigger loss than having to pay the costs of reversal, so if

$(-2g) > -E^{11}$. In total in this scenario therefore at least 2/3 of the population will vote in favor of the reform, since $-E$ is always negative. If you would start with reform 2, only 1/3 of the population will gain from the first reform, and vote in favor of the second one as long as $0 > -E$. The other 66 % of the population will only advocate the second reform as long as $-g > E$. The chance that the second reform (being reform 1 from the table) is not voted in favor for is therewith higher, since the majority of the population will have lost already¹². Naturally, in the end it does not matter in terms of gaining and losing which reform is implemented first, but in terms of sequencing the chance that both reforms will be voted in favor of is higher when starting with reform 1. This kind of sequencing issues becomes even more important if there are possibilities for compensation between winners and losers.

In practice the split up of Czechoslovakia might be explained by similar voting behavior. Also the fact that the reforms on democracy issues, that were often popular among the population, were undertaken early in the reform process, with afterwards the less popular economic reforms can be considered a well thought of form of sequencing.

⁹ Calculation: $2/3 (g) + 1/3 (-2g) + 1/3 (2g) + 2/3 (-g) - y > -E$

¹⁰ 2/3 of the population gained at reform 1 and will vote in favor of reform 2 as long as $1/3 (2g) + 2/3 (-g) > -E$

¹¹ 1/3 of the population lost from reform 1 and will vote in favor of reform 2 as long as $-2g + 1/3 (2g) + 2/3 (-g) > -E$

¹² 2/3 of the population lost at reform 2 and will vote in favor of reform 1 as long as $-g + 2/3 (g) + 1/3 (-2g) > -E$, so if $-g > E$. Only 1/3 of the population gained at reform 2 and will vote in favor of reform 1 as long as $2/3 (g) - 2g + 1/3 (-2g) > -E$, so if $0 > -E$

3. Soft Budget Constraints

The second part of this summary paper will deal with the issue of soft budget constraints, and the relevance of these constraints for transition economies.

3.1 What are Soft Budget Constraints

In a socialist economy, price mechanisms were largely absent. The economy was mainly supply driven, and the government set the prices as a fixed mark-up over costs. The output of each firm was determined by the central plans. This resulted in an enterprise sector that was focused on achieving the agreed output, neglecting the costs and efficiency of production and necessity of the demand for the goods in the market. In addition, the government also supported firms when they were not functioning successfully by means of tax relieves or subsidies. As a result profits were not displaying any information, and the government bailed out all firms that were operating with losses. Naturally, this resulted in large distortions in the enterprise sector and as such the whole economy. The most important were; a too large industrial sector; too few small and medium sized enterprises; the goods supplied were not necessarily those that were demanded by the market; firms had excessive inventories and the goods were of low quality¹³.

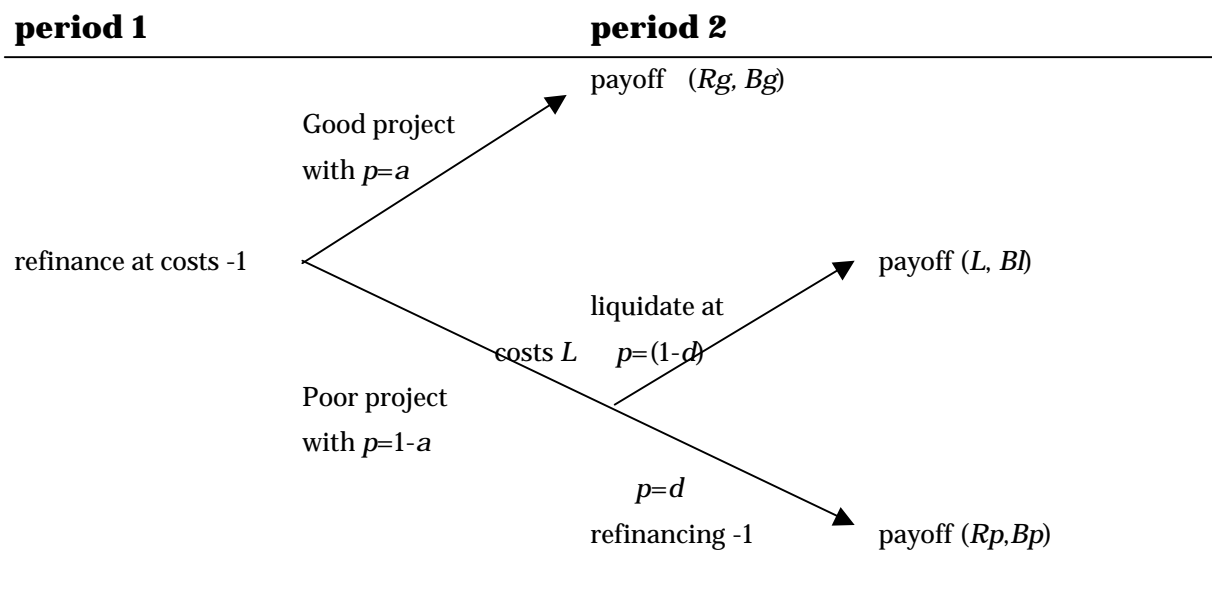
As a result, the business culture in the countries that started transition was not based on market principles like payment in time and profitability. Within the enterprise sector, the soft budget constraints (SBC's) were maintained. Just like in the socialist times, firms continued to supply each other goods without asking payment in cash. Large inter-enterprise arrears were building up and banks and governments were more or less forced to continue bailing out the firms in order to prevent the whole sector to collapse. Removing the soft budget constraint of firms was considered one of the important reforms needed in order to succeed in transition to a market economy, but how this was best done in practice was not clear at all.

¹³ Berg (1994).

3.2 Soft Budget Constraints: a model

Given that under socialism almost all firms were operating under soft budget constraints, it was impossible for the governments to bail out all enterprises at the start of transition. The amounts involved were so large that governments simply did not have enough means to cover all the inter-enterprise arrears and other debts of the state owned enterprises. As a result the soft budget constraints remained present in the early years of transition, and had a devastating effect on the economy. Badly functioning firms were not given any incentive to restructure their enterprise as long as SBC's constraints remained present. Even privatizing the banking sector did not solve the problem, since banks inherited the portfolio of their Former State Owned bank, including all the bad debts of the enterprises. They might have intending to function under hard budget constraints, as regular commercial banks in market economies do. But at the same time they were often facing the difficult choice to refinance bad debt, hoping that some of the earlier debts might be repaid once the firm becomes profitable, or stop financing the firm. If the bank would not refinance the firms, they might go bankrupt and all previously provided credits would never be repaid. This situation can be modeled the following way:

figure 2



At the start of period 1 the bank can decide whether or not to refinance a firm, that is with probability a a good performing firm, and with probability $(1-a)$ a poor performing firm. In general banks will decide to refinance all firms as long as the total expected payoff of the credit exceed the initial refinancing costs of 1, so if :

$$a(Rg+bg) + (1-a)[d(Rp+Bp-1) + (1-d)(L+Bl)] > 1.$$

After 1 period, the bank will know what kind of firm it has refinanced. There is no problem if the firm turns out to be good functioning. In that case it will achieve good revenues, and will be able to repay the bank at a later stage. However, if the firm turns out to be poorly performing the bank has the option to liquidate the firm in the next period, which will cost L , or to refinance the firm again with a credit of 1. After the 2nd refinancing operation, the firm is expected to get revenue of Rp . In addition to the expected revenues, private benefits are influencing the banks decision. If the firm will be refinanced no layoffs are needed, people receive income and this will translated in private benefits equal to Bp . With liquidation, the private benefits equal Bl , which is most likely equal to zero or very low, since there are no major benefits to be expected when a firm closes.

In general refinancing of the poor performing enterprises will take place as long as the expected payoffs minus the costs of refinancing will be higher than the payoffs of liquidation, so if $L+Bl < Rp+Bp-1$. The initial refinancing costs of -1 are not taken into consideration during this decision since they are seen as sunk costs. However, if ex-ante this problem would have been known, the initial refinancing would not have taken place if $Rp+Bp < 2$. If $L+Bl+1 < Rp+Bp < 2$ the firm will be refinanced ex-post, even though ex-ante this would not have been decided upon.

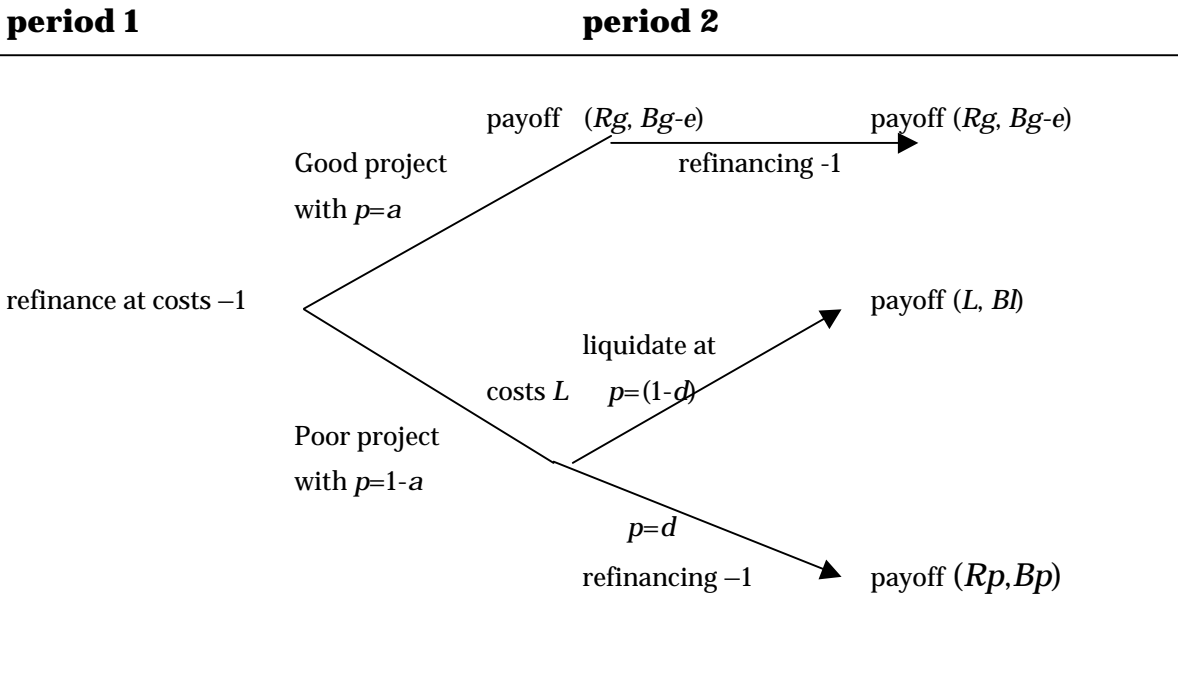
Poor performing firms thus have an incentive to ask for loans as long as the banks expected payoff ex-ante exceeds the costs of financing the firm. And once financing has been provided to a poor performing firm, the bank will have an incentive to refinance the firm, simply because that is cheaper than liquidating it. As a result banks are keeping soft budget constraints in tact ex post, even though this might be against their intentions ex ante.

3.3 The Ratchet effect

As a result of refinancing poorly performing firms, good firms in transition countries had a hard time obtaining the necessary financial loans to keep their business operational. This is called the Ratchet effect. Assume good firms need refinancing in order to continue their business after 1 period. They also have to put effort in restructuring their enterprise during period 1, which costs e . If a firm puts effort in restructuring, their private benefits will be lower than without putting effort, due to for instance costs of layoffs, stricter working conditions or reduced salaries. However, it is assumed that the total payoff of the good performing firm that shows effort ($Re+Be-e$) exceeds the payoff of the good firm with no effort ($Rg+Bg$), so good firms should be encouraged to put effort in restructuring.

But when the firm requests refinancing at period, it has to compete with the poorly performing firm that did not restructure and also needs the financial means to stay operation (though not profitable). So the bank will only refinance the good firm as long as $(Rg+Bg-e-1) > (Rp+Bp-1)$. Naturally this is discouraging managers of good firms to put effort in restructuring.

figure 3



Including the option of putting effort also for poorly performing firms can extend the model. The additional assumption is that a poorly performing firm that puts in effort

in period 1 becomes a good firm at the end of that period. This does not change the model essentially, though it creates a moral hazard problem. The bank does not know which firms are willing to put in effort in making their enterprise successful, and which ones will need to be either refinanced or liquidated. And again the poorly performing firms that do not make any effort to restructure their firm function will retain financial sources from the banks, keeping the SBC's constraint in tact and creating a credit crunch for the viable firms that do need additional finance.

3.4 Ways to eliminate Soft Budget Constraints

Dealing with SBC's constraints is not easy, there does not seem to be a clear-cut solution to them. However, in market economies the phenomenon of bailing out firms is far less common, so it should be possible to indicate at least some factors that could help eliminating the SBC's.

First of all, privatizing State Owned Banks will be a major step forwards in hardening the budgets. State owned banks are, due to their direct relation with the state, taking the private benefits of the population into account. The government is responsible for the social losses of the country, and might be hesitant to declare a large number of firms or sectors bankrupt at the same time. Commercial banks do not have the responsibility to take care for the well being of the population directly, and will only focus at the revenues of an enterprise. Thus they will much earlier be inclined to liquidate a firm, instead of continuing to refinance.

Besides, commercial banks need their loans to be repaid in the end; otherwise the bank itself will not be successful. Therefore it can be expected that they will monitor their customers better, and make more extensive comparisons and analysis before refinancing firms.

Secondly the entry of new firms will harden the budgets. Former state owned firms have to become more competitive and customer-oriented, in order to keep selling their products. Besides, since newly started firms or foreign participants in the market do not have any bad debts with the bank, and do not have to cover costs of restructuring, they might be eligible for loans that might otherwise have gone to the poorly performing firms. And the more firms in the market are competitively operating, the harder it will be to stick to soft budgets. The business environment will change; cash or advance payments will become rule, thus avoiding the building of inter-enterprise arrears.

In practice several policy measures have been taken to deal with the soft budget problems. Several countries opted for government bailouts, where the government at one point took all the bad loans from the banks, thus cleaning their portfolio. This gave banks the opportunity to start working on a credible portfolio and not having to deal with previous mistakes. Also all inter-enterprise debts were sometimes cancelled off against each other, leaving the firms without huge payment arrears. Another solution was swapping debts for assets, giving firms the opportunity to pay off their debts using assets. A fourth policy done was a re-capitalization of banks. Governments provided banks with additional money, leaving them some room to both deal with their previous credits and work on a current portfolio.

4. Conclusions

In 1989, when the first large group of countries in Central and Eastern Europe started the transition process, no one really knew all the aspects it would involve. A decade later it became clear that the process is a slow one, changes are taking time and the countries need time to recover. Though many countries are well underway in transforming themselves into viable market economies, several other countries are still struggling with basic reforms. It became clear that the choice of reform strategy, being gradual or shock, is not a major determinant in the success of the reform package. More important is the commitment of the country to reform, including the less popular but necessary changes. When transition ends and being a developed market economy begins is not at all clear, though several fundamental reforms like liberalization of markets and prices, privatization of state owned property and stabilization (including hardening the budget constraints) are absolutely basic for a market economy.

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