

NET AND TOTAL TRANSITION COSTS: THE TIMING OF ECONOMIC REFORM

Luiz Carlos Bresser-Pereira and Jairo Abud*

World Development 25 (6), June 1997: 905-914.

Abstract. Countries face an ongoing need for fiscal adjustment and economic reform – adjustment and reforms that involve short-term transition costs. Thus economic agents, depending on their time preference for present consumption or on the level of economic populism in a given society, will postpone the required measures. On the other hand, if the corrective measures are not adopted, after a certain lapse of time procrastination costs arise. The net transition costs of adjustment and reform are the difference between these two costs: they may explain the timing of reform. If adjustment and reform is undertaken soon after economic distortions appear, the net transition costs will be high, but, as a tradeoff, recovery will come sooner. As economic agents show a greater preference for present consumption, they will postpone adjustment and reform. Then, the procrastination costs will start to rise. This trend may reach a point where the cost curve of adjustment and reform cross the procrastination cost curve. At this point net transition costs turn negative, so that even for the more populist economic agents that give full preference for present consumption, it becomes rational to adjust and reform.

Capitalist economies face budget deficits and public debt crises. Thus, from time to time, policy-makers must meet the challenge of fiscal adjustment and economic reform. In order to maintain or recover state solvency, it is necessary to reduce public expenditures or increase taxes. The adjustment costs involved in such actions are obvious. They are often thought of as major political obstacles to sound economic policies. Yet, they are short-term costs that should be compared with the costs of muddling through the crisis, or, more precisely, the costs of procrastinating adjustment or reform.

In this paper we will define as net transition costs the difference between the costs of adjustment and the costs of procrastinating reforms in the hope of muddling through the crisis. We also define total transition as the cumulative costs that a country faces from the time economic distortions emerged, causing inflation and eventually an output gap, till the moment economic reforms allow the country to return to stability and growth.¹

The concept of net transition costs will be useful to size up the timing for adjustment policies or for economic reforms.² If the decision to adjust is taken at an early stage, as it usually occurs in the advanced societies, net costs will probably be high. As a trade-off, the economy will sooner return to stability and growth. Thus, total or medium term costs will be smaller, the overall benefit to society as a whole will be greater. On the other hand, if adjustment is delayed, as often it dramatically happens in developing economies, the costs of muddling through the crisis will increase as time goes on, until they exceed the costs of adjustment. When this happens, delaying adjustment will be irrational in collective action terms, even in the short run. Yet, for each individual and for interest groups, this may not be so, since they will face their own costs of adjustment and procrastination.

The literature on the timing of adjustment usually emphasizes the distributive conflict between groups or classes. This aspect will also be included in this paper, but we are focusing on a collective action problem. Our main concern will be the relations between the costs of adjusting and the costs of muddling through the crisis - costs that can be taken for the country as a whole and for each individual interest group. Although the model here presented is refereed to economic adjustment, it can also be applied to market oriented economic reforms as trade liberalization, privatization and deregulation.

In the first section of this paper we will discuss the concept of net transition costs of adjustment and propose two curves - the adjustment cost curve and the procrastination cost curve. Timing is an essential component of the concept. Society's time preference (discount rate) will be a major factor in selecting when to implement adjustment measures and in determining the corresponding net costs. In the second section, we will discuss three adjustment styles, relating them to different country experiences: adjustment when net transitional costs are positive, when they are near zero, and when they are negative. In the third section we will define and

discuss the total costs of adjustment. Finally, in the fourth section we will introduce social conflict, and we will discuss the different net and total transition costs faced by interest groups.

The central question addressed here is why certain societies decide to adjust earlier than others. In theory, once fiscal imbalance is recognized, the sooner adjustment is undertaken, the higher the net transitional costs. The smaller, however, will be total or medium term costs. The evaluation of the total costs involved will depend on the definition of the relevant adjustment timing. In practice, countries where the population has a high time preference for present consumption or that are lenient with inflation, will tend to postpone adjustment. In addition, conflicting group interests may have an important role in the timing of adjustment.

1. The Net Costs of Adjustment

The net transition costs of adjustment are defined as the costs of adjustment less the costs of muddling through the crisis. When economic reforms are required, policy-makers have two options: to start reforms as soon as economic problems arise or to muddle through, embracing a crisis-management policy to face the demands of different social groups. As procrastination related economic distortions appear, the burden will be shared in different degrees by segments of society. Clearly, a procrastination policy - perhaps waiting for a social consensus on the required reforms - implies smaller costs at the outset, when compared to the short term costs involved in adjustment programs, which usually include public expenditure cuts and/or tax increases, and, eventually, temporary recession and unemployment. Thus, for society as a whole adjustment costs involve short-term loss of output, or some welfare loss. For each individual group, they represent revenue losses that will be different for each group.

The difference between these two costs - adjustment and procrastination cost - give us the net costs of adjustment. If these net costs are positive and high, society will tend to shun reform, unless it has a strong preference for future consumption, or if it is characterized by a strong sensitivity to the economic distortions. If, for instance, a given society is highly resistant to inflation, it will support adjustment more easily than if it is used to price instability.

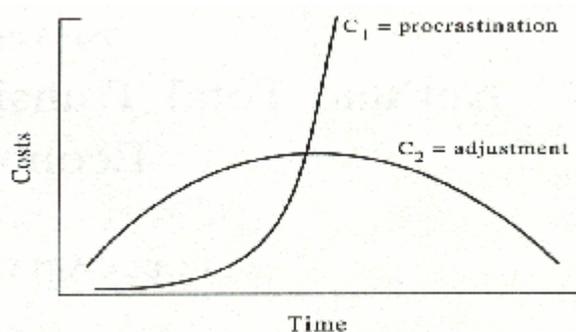


Figure 1. Adjustment and procrastination costs.

The actual calculation of net transition costs is difficult since they are not a clearly defined concept, nor readily measurable. In a stylized way, however, it is possible to estimate them, depicting in the same figure the costs of adjustment and the costs of postponing adjustment. Figure 1 shows two curves: the adjustment cost curve and the procrastination cost curve. In the horizontal axis we have time and in the vertical one, costs. Thus, as the curve rises, costs go up.

The C_1 curve represents the costs involved in postponing the solution of the crisis, as society hesitates to undertake the required fiscal adjustment and the respective government authorities adopt *ad-hoc* corrective policies that only increase economic distortions in resource allocation and income distribution. These costs become evident when chronic budget deficits and excess demand turns into balance of payment problems, rising inflation, reduction of growth rates and unemployment. Procrastination costs ultimately derive from the fact that economic agents lose confidence in government policy and in the prospects of the economy, develop negative expectations, and eventually reduce their investments.

In quantitative terms, the procrastination costs could be measured by the rate of inflation, that is, by an indicator of economic disarray if inflation is high. Yet a more appropriate measure would be the gap between the actual and potential rate of growth. In the initial phase of the cycle, this curve may decline, as budget deficit combined with evaluation of the exchange rate produce high growth and low inflation. But soon these populist

policies get exhausted, and the procrastination curve starts to rise at an increasing rate. As time goes by, the costs per unit of time of delaying adjustment increase, assuming the form of chronic recession and lasting unemployment. At the limit, when the economy arrives to hyperinflation and economic chaos, these costs become exceedingly high: the C_1 curve becomes increasingly vertical.

Curve C_2 represents the envelope curve of many possible actual adjustment cost curves. This envelope curve - as well as each individual curve - has an inverted U-shape. As adjustment is undertaken, costs immediately increase, as public expenditures are reduced or taxes increased. Yet, this cost increase is short-term. Soon the costs of adjustment will level out and start being reduced, as the economy stabilizes and growth is gradually resumed. C_2 is an envelope curve because it contains "n" curves, each representing the costs of a specific adjustment program over time until the program meets its target: stabilization and growth resumption.

The shapes of the two curves are the ones that we assume will usually take place. The rationality behind them is clear. In real terms different situations may occur. We may particularly think of a procrastination curve that never rises dramatically as limited adjustment and reforms move the curve to the right. In this case the actual form of the C_1 will be influenced by actual economic policies. On the other hand, the costs of adjustment and reform may be higher or smaller depending on their consistency or pertinence. Thus the envelope curve C_2 will change accordingly. In general terms, however, the shapes of the two curves will tend to be the ones depicted in Figure 1.

Both C_1 and C_2 are cost curves based on expectations. Economic agents form their expectations on the costs of adjustment based on the policies implemented in the past and their outcomes. Let's suppose that, in the past, these costs were extremely high. Then, the agents will predict that it will happen again during the adjustment process. In contrast, economic policymakers' expectations are based on information that only the government has, and that it cannot make public. The government must convince the society that the economic reforms must be implemented as soon as possible, or the cost of procrastination will be higher. This process of convincing is not easy since the government and the society predict C_1 and C_2 curves with different shapes. Policymakers will tend to view the cost of procrastinating adjustment as rising sharply, while economic agents will tend to be less pessimistic. On the other hand, government will tend to expect smaller adjustment costs than economic agents.

This may be expressed in two equations:

$$C_1 = E(H_{t-1}, \theta)$$

$$C_2 = E(P, \theta)$$

where:

H_{t-1} = Adjustment in the past

P = Present situation

θ = Government information regarding the two costs

For economic agents the first component of the two curves is the relevant one and θ assumes a low or zero value. In the other hand, the government faces a different situation: the first component of the two curves is less relevant while θ will assume a high value. From this point of view, the shape of C_1 and C_2 will depend on which component is taken as the relevant one. Once we are talking about expectations, there is no certainty that they will materialize.

While there is no decision on adjustment and reform a given country that is facing economic crisis will be in the C_1 curve: it will be incurring the cost of delaying adjustment and economic reform. When a real decision is taken to start reform, the country will "jump" from curve C_1 to curve C_2 . Now the relevant costs are the adjustment costs, which include and initially aggravate the costs of the ongoing economic crisis.

At a given time, the distance between the two curves represents the net transition costs, NTC (t):

$$NTC(t) = C_1(t) - C_2(t)$$

Initially net transition costs (and the area between C_1 and C_2 , that corresponds to the net transition costs) are positive, since adjustment costs are in the short run higher than the procrastination costs. They turn negative when C_1 cuts C_2 . After this point even in the short-run net transition costs are negative: adjustment costs are now smaller than the costs of delaying adjustment.

The C_1 curve intersects the C_2 curve at the point it turns quasi-vertical. When this happens, it ceases to be rational even to economic agents with a high time preference for present consumption.³ Since the C_2 curve is a hypothetical envelope curve, it assumes rational behavior of different economic agents revealing different time preferences. The more short term the time preference of the economic agent, the later he will undertake adjustment. But, after the C_1 curve turns quasi-vertical, it makes no sense anymore to delay adjustment, even for an economic agent that is only interested in present gains, discounting future consumption at a very high rate.

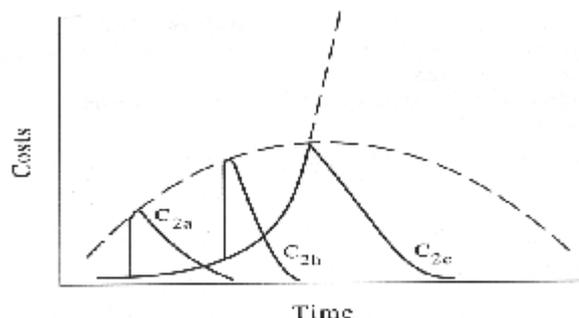


Figure 2. The C_2 as an envelope curve.

In Figure 2 we only show depict the C_2 adjustment cost envelope curve. And we draw three of the “n” actual possible curves, each one representing a different time preference for future consumption. C_{2a} represents a situation where society adopted economic reforms quickly, proving a clear preference for future consumption, while, in the extreme, C_{2c} , represents the opposite: a strong preference for present consumption. Notice that the three curves have the same inverted U-shape, for simplification they have the same slope while costs are increasing, but different recovery slopes. The steeper the slope of the curve, the more efficient economic reforms are and the sooner the economy will reach stability and resume growth. In Figure 2, the more efficient adjustment is depicted in curve C_{2b} .

Curves C_1 and C_2 follow a standard path shown in Figure 1. Starting from the same point, it can easily be seen that initially $C_1 < C_2$, since the short term costs of muddling through the crisis are small or none, while the transition adjustment costs are high: the economy is growing and employment is rising; to adjust means recession, temporary unemployment. In this moment, although inflation is rising and the threat of a balance of payments crisis looms on the horizon, the need for reform is not easily perceived by society, particularly if its members’ time preference is short termed. As a result, the required fiscal adjustment, or - more broadly - the required economic reforms, will probably not achieve political support. Yet, as times goes on, economic distortions will increase, public savings will be reduced and the state will come to a fiscal crisis. On the other hand, inflation rises, the investment rate declines, and economic activity slow down. In this moment, as the net transition costs become negative, political support for economic reforms should increase and reform should be undertaken.

There will be then no more room for variations in time preference, since even in the short run it is advantageous to adjust. Yet, this change will not take place immediately, since there is a perception gap between the moment net transition costs become negative and the moment this fact is perceived by society. On the other hand, society may delay economic reform because it is not certain of the adjustment costs involved.

Assuming that economic agents are risk averse, if the economic reform implies radical measures with outcomes that are difficult to predict, society will tend to postpone reform. In our curves we are assuming that economic agents are risk neutral, so that they evaluate the expected value of outcomes as if they were certain. If we assumed they were risk averse, the expected adjustment and procrastination costs would be transformed into uncertainty equivalents, but the negative utility of delaying reform would be higher, since the agent would attach more value to negative than to positive outcomes. We are also assuming that economic have consistent time preferences. This means that the rate at which they discount the future is constant, without which it would be possible to argue that the calculation of the expected cost depend on the actual costs.

Furthermore, net adjustment costs may have turned negative for society as a whole, but they may remain positive for some powerful economic groups that will continue to oppose reform. We will discuss this below.

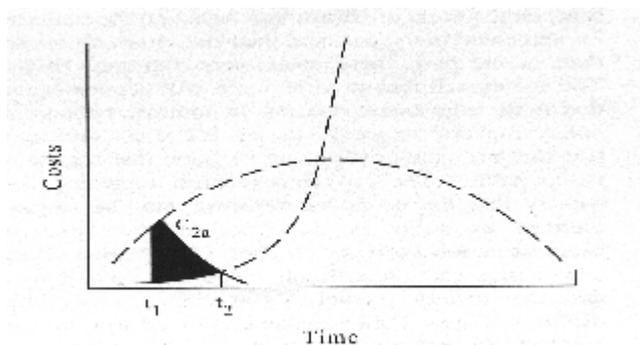


Figure 3. A specific adjustment program and its NTC.

While we dealt only with the hypothetical curve C_2 , we could not measure the total costs involved. However, when we turn to actual adjustment cost curves, as we do in Figure 3, it is possible to measure the net transition costs and the total transition costs.

In Figure 3, the moment where reforms start to be implemented is t_1 . In this moment the economy jumps from C_1 to C_2 , assuming the form of C_{2a} . There is an immediate and large increase in costs in this jump, since we assume that the society will have to incur the adjustment costs that C_2 depicts. For some time adjustment costs will continue to increase, but as positive results begin to appear, the curve changes direction and recovery starts.

The total net transitional costs (TNTC) shown in the shaded area in Figure 3, can be expressed as:

$$\text{TNTC}(t) = \int_{t_1}^{t_2} [C_1(t) - C_{2a}(t)] dt$$

where $t = t_1$, time when the reforms are implemented and

$t = t_2$, time when $(C_1 - C_{2a} = 0)$

Moreover in Figure 3, the total transition costs can be expressed as the area between the horizontal axis and the cost path formed by the procrastination cost curve, the jump to the adjustment cost curve, C_{2a} , and this curve itself. The total transitional costs will be discussed in section 3.

2. Net Transition Costs: Positive, Neutral, or Negative

The net transition costs incurred by a country may be positive, neutral or negative, depending on the moment the country undertakes adjustment. The sooner adjustment is undertaken, the higher, or more positive net transition costs will be. As a trade-off, the smaller will be total transition costs. Conversely, if adjustment measures are adopted late, net transition costs will most likely already be negative, but total transition costs will be higher than in the previous alternative.

Net transition costs will be positive whenever adjustment is undertaken before the adjustment cost curve, C_2 , is below the procrastination cost curve, C_1 . Or, in other words, when economic reforms, which in this paper we are equating with fiscal adjustment, are initiated soon after economic distortions arise. Government, responding to the crisis, implements adjustment measures by reducing public expenditures, increasing taxes, getting prices right, particularly the exchange rate, which usually will be devaluated, and public prices, which will be raised, eliminating subsidies. The country, at this moment, faces "normal times", specifically a conventional excess demand situation, and the standard IMF stabilization policy is recommended.⁴

Figure 4 (case 1) presents a case of net positive transition costs. The stabilization or adjustment program starts at time t_1 . At this point costs jump from C_1 to C_2 due to the adjustment program. The economy, which is experiencing an artificial boom but is threatened by a balance of payments crisis while inflation is beginning to accelerate, is suddenly constrained to adjust. As a consequence, costs of procrastination, that were none or practically none, change into net positive costs of adjustment. Yet, after some time the program will show results. Depending on the efficiency of the economic reforms, the adjustment cost curve will, sooner or later, turn up and, again depending on this efficiency, will present a steeper or less steep slope, till the curve reaches the horizontal axis, representing a steady state situation. The net transition costs, or the positive difference

between C_1 and C_{2a} , can be seen in the shaded area, which represents the total net transition costs or the burden involved in the decision to adjust the economy at an earlier stage of the crisis.

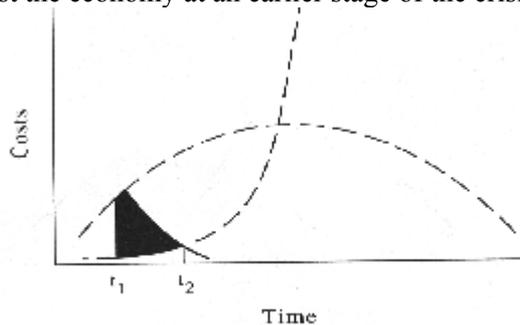


Figure 4. Case 1.

Case 2 (Figure 5) is of a country that incurs zero or neutral net costs. In this case society delays the adjustment process when economic distortion emerges. It will remain in the C_1 curve, muddling through the crisis, adopting partial adjustment measures, managing the demands of the different social groups in the hope that a “consensus” to undertake reforms will be eventually be achieved, or - better - a miracle, an exogenous positive factor will make it possible to avoid them. Yet, the costs of muddling through the crisis continue to augment. Balance of payments stabilization may have been achieved, but inflation is now probably high. And the economy is probably already slowing-down. If, when they are becoming equal to the adjustment costs, a consensus is achieved and society decides to start its adjustment process, net costs of adjustment will be zero. This case is illustrated in Figure 5. Reforms starts at time t_2 , when C_1 crosses C_2 ($C_1 - C_2 = 0$).

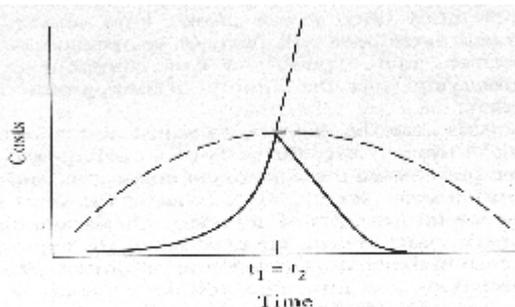


Figure 5. Case 2.

Finally, in Figure 6 (case 3) we have a case of negative net costs of adjustment. In this case the distortions of the economy went so far, that the adjustment program itself will in the short run reduce costs, but total costs will be very high, given the extraordinarily high costs of procrastinating the crisis. The economy will be, in this moment, experiencing abnormal times. Budget deficits turn into a fiscal crisis. Public savings are now negative, the state has lost credit. Inflation turned to hyperinflation. The economy is experiencing chaos. In this moment, standard IMF stabilization policies, which were already doubtful in the second case, will probably not work. It is not enough to adopt gradual fiscal and monetary policies, nor to get prices right. Instead of orthodoxy, abnormal times require some type of heterodoxy. Only a shock, with the definition of a nominal anchor, will end inflation. The anchor may be an exchange rate, the money supply, some strategic prices, or all prices (a freeze). Some kind of explicit political agreement will have to be reached - an agreement that express a real compromise or, alternatively, just the victory of one group over another.⁵

In this case the decision to adjust and reform is taken at time t_3 , after the costs-of-muddling-through curve crossed the adjustment cost curve, net transition costs are negative. Even in the short run there are no net costs-of- adjusting. On the contrary, once economic reforms are undertaken, the explosive increase in the costs of postponing reforms is halted, expectations turn favorable, and the economy starts recovery. Depending on the efficiency of the reforms, rapid positive outcomes may be produced.

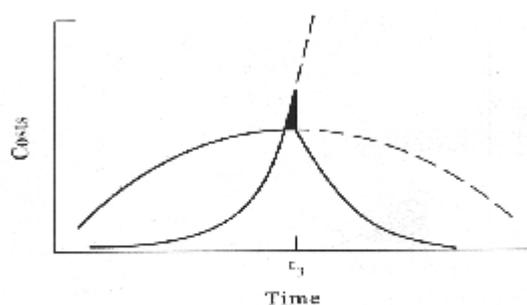


Figure 6. Case 3.

These three scenarios illustrate the situation of countries that fell into crisis in Latin America in the 1980s. Mexico provides an example of positive net adjustment costs. Mexico decided to start its adjustment program in 1983, just after the debt crisis broke out. It was undoubtedly a painful adjustment process. Yet the country or its government -- where the role of President de la Madrid was crucial -- showed a future consumption preference. The pay off was positive. The economy stabilized in 1987 and started growing in 1990.⁶ Chile is another example. Soon after the 1982 crisis, deep economic reforms were undertaken. The fiscal crisis was completely overcome, and, since 1985, the country has been growing with price stability.

Bolivia, Argentina and Peru are examples of case III. These three countries only undertook fiscal adjustment and economic reforms after hyperinflation, when the costs of procrastinating the crisis had skyrocketed and net transition costs turned negative. Bolivia did that in 1985, Peru in 1990, Argentina in 1991.⁷ Neither Argentina nor Peru may be seen as having achieved the target line, but recovery is underway.

Finally, Brazil is an approximate illustration of case II. The country did not experience hyperinflation and economic chaos. Thus, net transition costs had not become negative. As a consequence, government muddled through the crisis for a longer time. Several attempts to adjust and reform were undertaken but lack of political support and/or incorrect diagnosis about the cause of inflation, whose inertial character was often ignored by conventional economists and the multilateral authorities, generated recurrent failures.⁸ In the first semester of 1994 an innovative stabilization program was successfully implemented, before economic chaos made it imperative. It is difficult to say which of these countries has undertaken the highest total costs. Peru and Argentina, countries that faced hyperinflation, have probably paid the most.

3. Total Transition Costs

Thus, the later adjustment is initiated, the smaller will be the net transition costs. When the economy reaches or nears hyperinflation, net transition costs are negative. What, however, will happen to total transition costs? Total costs are the cumulative procrastination costs (while adjustment is not undertaken) plus the cumulative adjustment costs from the moment the decision to adjust is taken. In the figures where we have an actual cost-curve and not a hypothetical envelope one, it corresponds to the area between the horizontal axis and the path the country undergoes when imbalance begins, first incurring procrastination costs and second, after adjustment is initiated, in adjustment costs. Initially, while adjustment is not undertaken, this path is constituted by the procrastination cost curve, and after it is started, by the adjustment cost curve.

If net transition costs are reduced as adjustment is delayed, the opposite happens to total transition costs. The later economic reforms are undertaken, the greater total transition cost will be. The reason is that if economic adjustment is achieved soon after economic distortions manifest themselves, the economy will (1) avoid the costs of procrastinating adjustment and reform, and (2) experience easier stabilization and the resumption of growth.

The first reason derives clearly from the above analysis. The costs involved in postponing adjustment and economic reform are increasing and may end up being very high. The second is related to what we have been referring to as the efficiency of economic reforms, but this subject should now be broadened to include the increasing difficulty to stabilize and resume growth that an economy that falls into deep crisis faces. Failure in fiscal adjustment and stabilization programs is very common, but they are particularly frequent when the crisis becomes extreme and the economy faces abnormal times. In normal times, conventional fiscal and monetary policies have a good chance to be effective and efficient. In abnormal times there are no easy paths to

adjustment and reform. The policy-maker will not be permitted to use just standard formulas. He also will have to resort to imagination and sometimes be audacious. Shock treatment will often be required. Moreover he can never be sure that his policies will work, not only because they may lack sufficient political support, but also because in the abnormal times that characterize deep crises he will have to adopt innovative policies. The policies may be the required ones for the occasion or may just be wrong or inefficient. If this is the case the economy will continue to incur in the procrastination cost, despite the attempt to adjust and reform. Total or cumulative costs will continue to increase.

A failed attempt to adjust may lead to a jump to the cost of adjustment curve (or at least midway between it and the procrastination cost curve) but instead of taking a path that leads to growth the economy just goes back to the procrastination cost curve. In our graphics we are not showing this case, but this could be easily done.

Figures 7-9 compare the total costs involved in the three preceding cases. Since costs emerge when distortions appear and cease when the specific adjustment cost curve meets the horizontal axis total costs can be represented by the area between the horizontal axis and the costs path, which combine, in a successful way, the procrastination cost and the adjustment cost curve.

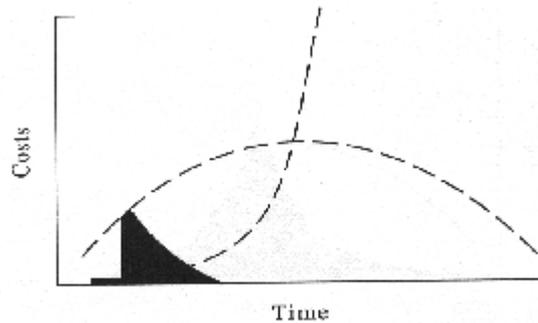


Figure 7. Total costs of adjustment—case 1.

Although net costs may be negative, total costs are always positive and increasing as times goes on. As it can be seen in Figures 7-9, in case 1(a) the area representing total costs is smaller than case 2(a), which in turn is smaller than case 3(a). In this last case, the fact that the country was facing negative net costs when it decided to reform does not mean that its total transitional costs are not large. On the contrary, it indicates that they have become extremely high.

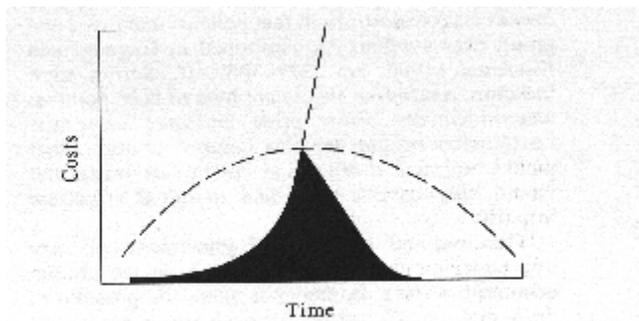


Figure 8. Total costs of adjustment—case 2.

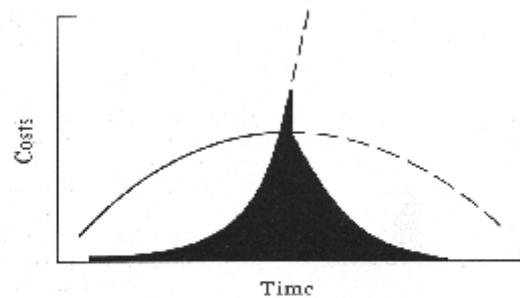


Figure 9. Total costs of adjustment—case 3.

4. Different Social Groups

Thus, once fiscal imbalance is defined, the sooner adjustment is undertaken, the higher the net transitional costs, but the lower the total adjustment costs. Yet, history has shown that in many instances societies fail to provide political support to the required reforms, remaining on the C_1 curve. This behavior may be irrational from a collective standpoint, but it is not irrational if, instead, we desegregate society into its constituent social groups. If society is highly heterogeneous, characterized by high income concentration, conflicts will be more acute, populist policies that aggravate the crisis will be more likely (Sachs, 1988), and adjustment will tend to be delayed (Alesina and Drazen, 1991). In this case, we will have a C_{1i} curve for each group, each curve representing the expected value of procrastinating adjustment and reform for the respective groups. The groups

that suffer less with the crisis would have a lower (if any) procrastination cost: the respective C_{1i} curve would in actual terms not cross the C_2 or would cross it on the right side of C_1 , while the groups that suffer more would have procrastination costs that would cross the C_2 curve before the C_1 does.⁹

The assumption is that total transition costs will be shared unevenly between social groups. First, because the procrastination costs may be different, second because the burden of the adjustment may be borne differently, depending on the group.

Different procrastination costs imply that the crisis affects social groups in a distinct way. If, for instance, an economy experiences a fiscal crisis and high inflation, it will probably be constrained to have high real interest rates. This will damage society as a whole, but it will favor renters. As to the burden of adjustment falling on certain groups rather than on others, the examples are numerous. If it is necessary to raise taxes, whose taxes will be increased? If it is necessary to cut public expenditures, which groups, sectors or regions will suffer more? If it is necessary to eliminate subsidies, which ones will be eliminated? Besides, some adjustment policies that are supposed to stabilize the economy or to improve resource allocation, in fact are just policies that favor one group over another. As mentioned in Haggard and Kaufman (1992: 307-308), if, during high inflation, sectors (or firms) are able to hold nominal wage increases below price increases using the justification of the need to control inflation, that would represent a draconian cut in real wages but would only have a slow and marginal effect on inflation.

Thus, net and total costs of adjustment will vary depending on the social group and on the chosen economic reform. In theory it would be possible to draw different C_1 curves for each social group and for each stabilization policy. For each group the procrastination cost curve has a different slope. For some the intersection with C_2 will take longer to be achieved. Worse than that, these groups may be profiting from the economic chaos in such a way that for them net transition costs are not negative. On the other hand, the adjustment cost curve may have a different format, as social groups lose more or less with reform. Thus, net transition costs may be already negative for society as a whole, but for several groups they may still be positive, because they are not losing with the crisis, or because they will lose more than others with adjustment.

Those groups that are not losing with the crisis or that will lose more with adjustment will naturally oppose reform. In some cases they know that they will lose more than they will gain, at least in the short run. In other cases the losses that the group will suffer are not clear and, in the absence of perfect foresight, they will exhibit the same behavior just because their fear of losses is compounded by the uncertainty about their real size. If these groups are well organized and, thus, politically powerful, they will be able to block adjustment despite the chaotic economic situation faced by society.

While the net transition costs remain positive for most groups, they will be engaged in a "War of Attrition - Prisoner's Dilemma" game, that is, they will not cooperate in the adjustment process, hoping that the other groups do. Yet, as Armijo (1994: 15), referring to the Brazilian inflation, observed, following the Alesina-Drazen model (1991), it seemed reasonable to suppose that, at some high level of inflation some groups would find their share of the costs of escalating inflation (of procrastinating the crisis) prohibitive. In this moment they would play the "Chicken" game, that is, they would unilaterally cooperate in the adjustment process. As a matter of fact, stabilization took place in Brazil in 1994, when the costs of procrastinating reform were very high and no net transition costs was required. Since inflation had an essentially inertial character, the actual short-term transition costs were, at least in the first year after adjustment, very small, no social group being defeated or constrained to give up.

Conclusion

In this paper we described two cost curves - the procrastination cost curve and the adjustment cost curve. These curves plus the target line defined two costs: net transition costs and total costs.

The concept of net transition costs is relevant because it shows that after a given moment, there are no costs in adjusting or reforming. Thus, even if society has a strong preference for present consumption, it would be rational on its part to adjust. Thus, the net transition costs indicates the limit rational moment for adjustment. Yet, this may not happen and adjustment will continue to be delayed, if society does not realize that it is at the limit point, or if it is risk averse and fears unexpected costs of adjustment particularly if they involve shock policies, or if powerful interest groups display different cost curves and have not yet reached the point where net transition costs are negative.

Net transition costs will be smaller, tending to be negative, the later economic reforms are undertaken. In contrast, total transition costs will be smaller, the sooner reform is undertaken. If societies do not have irrationally high preferences for present consumption, they should start adjustment as soon as economic distortions arise. In this way they would minimize total transition costs.

These concepts may be applied to actual situations. We did that, briefly, in relation to the main Latin American countries that fell into crisis in the early 1980s. Chile and Mexico were given as examples of early adjustment. Net transition costs were high, but total transition costs, relatively small. High costs had been incurred in Chile before, in the 1970s. Bolivia, Peru and Argentina are examples of countries that only undertake reform when net transition costs had turned highly negative, given the fiscal crisis and hyperinflation. Finally, Brazil is an intermediate case. It has not fallen into economic chaos; thus net transition costs have not turned clearly negative and reforms were only partially undertaken. Fiscal adjustment and the consolidation of a stabilization that was based on an exchange rate anchor remain the main challenges.

* The authors are grateful to Adam Przeworski, Alexandre Schwartzman, Antônio Carlos Alves, Hélcio Tokeshi, Leslie Armijo, Marco Antônio Jorge, Samuel Pessoa and Tony Killick for their comments.

1 The concepts developed in this paper were initially developed by Bresser-Pereira (1991), inspired by Przeworski's discussion of the transition costs of economic reforms (1990). Jairo Abud commented on them (1992).

2 - We are viewing adjustment policies and economic reforms as equivalent concepts. They may be also seen as complementary: adjustment being reserved for short-term policies, while reforms would have a medium range. Yet, this distinction is not relevant in the context of this paper.

3 - Since we are using time in the horizontal axis, to speak of a vertical perfectly inelastic curve is just a metaphorical approximation. Strictly, it is impossible to measure elasticity when one of the variables is time; on the other hand, the curve cannot be vertical, since time is always an elapsing movement. Yet, the two curves are inter-related, as the figure shows. When the cost curve of procrastinating the crisis nears verticality, there is no more rational justification to postpone adjustment. The correspondent envelope curve of adjustment costs is supposed to have reached its maximum point.

4 - For the concept of "normal" and "abnormal times" see Bresser-Pereira (1996).

5 - In Alesina and Drazen (1991), only the last alternative is admitted. Economic reforms are undertaken when one group is defeated and is constrained to take on all or most adjustment costs.

6- The December 1994 financial crisis will not be considered in this paper. It derived from subsequent mistakes in the Salinas administration, particularly the combination of trade liberalization with an overvalued exchange rate.

7 - Argentina tried to adjust and reform in 1985 with the Austral Plan, but failed. In this paper we are ignoring failed adjustment attempts.

8- On the failed attempts to stabilize inflation in Brazil see Bresser-Pereira (1996).

9 - Actually the individual curves are not fully comparable with the aggregate curves that we are examining in this paper. There is a logical reason for the fact that the procrastination curve, C_1 , crosses the envelope adjustment cost curve, C_2 , in the moment this curve reaches a maximum, while there is not such a rationale for the individual curves.

References

Alesina, A. and A. Drazen (1991) "Why are Stabilizations Delayed?". *American Economic Review*, 81(5) December 1991.

Armijo, Leslie E. (1994) "Brazilian Inflation in the 1980s and 1990s: a Collective Action Problem - or Something Worse?". Paper presented to the Latin America Studies Association's XVIIIth International Congress. Atlanta, March 1994.

Abud, Jairo (1992) "Interpretação Gráfica dos Custos de Programas de Ajustamento". *Revista de Economia Política* 11(4), October 1992.

Bresser-Pereira, Luiz Carlos (1991) "Economic Reforms and Economic Growth: Efficiency and Politics in Latin America". Chapter 1 of L. Bresser-Pereira, A. Przeworski and J. Maravall (1993) *Economic Reforms in New Democracies*. Cambridge: Cambridge University Press. This chapter circulated as an University of Chicago working paper in 1991.

Bresser-Pereira, Luiz Carlos (1996) *Economic Crisis and State Reform in Brazil*. Boulder, Co.: Lynne Rienner Publishers.

Haggard, S. e Kaufman, R. (1992) "Economic Adjustment and the Prospects for Democracy". In Haggard and Kaufman, eds. (1992) *The Politics of Adjustment: International Constraints, Distributive Conflicts and the State*. Princeton: Princeton University Press, 1992.

Przeworski, Adam (1990) *Markets and Democracy*. Cambridge: Cambridge University Press, 1992. The chapters of this book circulated as University of Chicago working papers in 1990.

Sachs, Jeffrey (1988) "Social Conflict and Populist Policies in Latin America". In R. Brunetta and C. Dell-Arringa, eds. (1989) *Labor Relations and Economic Performance*. London: Macmillan Press. Cambridge, Mass: NBER Working Paper no. 2897, March 1989. Paper presented to conference in Venice, October 1988.