Business Standard

The assignment problem

Even in stress situations, policy instruments and targets must be appropriately matched

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In games like football and basketball, there are two competing defensive strategies. "Man-to-man" assigns each player on a team the responsibility of covering a specific player on the opposing team. This way you can match your fastest or most agile players with the opposition's, thereby making for an even context. On the other hand, "zone" assigns each player the task of covering a specific area of the field or court and, in the process, dealing with whichever opposing player enters that area. The advantage of this strategy is that the strongest defensive players on the team can be asked to cover areas from which the opponents have the best prospects of scoring a goal or a basket.

As it happens, economic policy makers have to deal with a problem similar to the ones that football and basketball coaches face. They have a limited set of policy instruments that they can use and a long list of objectives to pursue. How do they match instruments with targets? This was posed as the "assignment problem" in the literature. Jan Tinbergen, the first Nobel laureate in Economics in 1969 (along with Ragnar Frisch), provided a simple solution. One, there had to be as many instruments in place as there were targets. Two, each instrument had to be assigned to the target that it was most likely to achieve. This is about as clear a description of man-to-man defence as you can get. This paradigm has dominated policy thinking for a long time and finds expression in a number of specific policy paradigms.

For example, in monetary policy, the instruments are either the quantity of money or its price (the interest rate). Theory and widespread evidence suggest that the macroeconomic outcome that these are most closely linked to is the inflation rate. Therefore, the assignment rule would suggest that inflation control should be the dominant objective of monetary policy. If other objectives are being pursued, other appropriate instruments must be created.

So is a zone approach to policy completely ruled out? Like good coaches, good policy makers would always like to keep the option of switching strategies open. Circumstances may change so much that the only apparent response to a new situation is to violate the assignment rule. Of course, when it works, it is feted as inspired, creative, out of the box. On the other hand, when it fails, there is criticism and condemnation, and the policy makers' knowledge of basic theory is questioned.

Notwithstanding the high risk of failure when actions are taken without the help of firm analytical foundations, policy makers are often faced with a compulsion to act. In other words, "do something! anything!" is a cry that is very difficult to ignore. Policy responses to the 2008 financial crisis and its aftermath have often been of this kind. In terms of the sporting analogy, the policy response to a stress situation shifts from the man-to-man to zone. And risks materialise because the analytical basis of a zone approach to policy is, generally speaking, weaker than that of man-to-man.

Let me illustrate the compulsions and challenges of a strategic switch with a recent instance. In 2010, the Turkish central bank went completely against the grain of its stated inflation targeting policy to slash its policy rate when its policy framework suggested that it should be doing exactly the opposite. The pressure to do so came from the fact that it had a completely open capital account, including allowing foreign investors access to the overnight loan market. This induced large amounts of short-term funds to come in to exploit the arbitrage on the overnight lending rate, which caused the currency to appreciate sharply, in turn impacting exports.

To offset this, it switched instruments and targets. The policy rate was now used, by lowering it, to reduce the arbitrage opportunity and, through this, reverse the currency appreciation. Simultaneously, reserve requirements on banks were sharply hiked to restrict credit with the objective of dampening inflationary pressures.

Over the next few months, the currency did depreciate. However, despite the heightened reserve requirements, credit boomed (at one point it grew in excess of 30 per cent), which presumably exacerbated inflationary risks. About a year after the switch was first made, the central bank went back to its earlier framework, raising the overnight rate by a massive 350 basis points in one move.

A number of interesting questions arise here. First, could the bank have stayed faithful to its man-to-man strategy by using curbs, even temporary ones, on short-term inflows rather than the interest rate instrument? Second, does the achievement of one target coming along with magnified risks of non-achievement on another constitute success or failure? The switch-back can be seen either as an admission of failure or as a successful use of a temporary switch. The debate will presumably continue.

How is this discussion relevant to India's current circumstances? A number of people have begun to ask whether it makes sense for the Reserve Bank of India to raise the repo rate in order to reverse the depreciation. In a sense, this would be the mirror image of the Turkish situation of three years ago. A monetary instrument closely associated with controlling demand-side inflationary pressures would be now used to pursue an exchange rate objective and, in doing so, risk failure on the earlier stated objective of managing the growth-inflation balance. If the Turkish experience is any precedent, even if this is offset by a significant easing of liquidity - reductions in the cash reserve ratio and, possibly, the statutory liquidity ratio - the risk is that a sharp contraction in credit could take place, aggravating the already fragile growth situation.

So, does the Turkish experience with switching provide any other lessons? Perhaps one needs to look back at what caused them to switch in the first place. It was the upward pressure on the currency being exerted by short-term inflows. Instead of switching strategies based on interest rates, should we be thinking of switching from our long-held aversion to short-term flows, even if temporarily?

Deviations from the assignment rule are tempting, but the risks that they bring with them are significant. Even in extreme stress situations, every way to appropriately match instruments with targets must be explored before strategic shifts are contemplated. The stakes are much higher than those in a football or basketball game.

The writer is director of research, Brookings India, and former deputy governor of the Reserve Bank of India. These views are personal