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IN THIS ISSUE

Who Benefits from Inflation Targeting?

NBER Research Associate **Frederic Mishkin** and co-author **Klaus Schmidt-Hebbel** review the pros and cons of inflation targeting in **Does Inflation Targeting Make A Difference?** (This work — published in NBER Working Paper No. 12876 — was completed before Mishkin became a member of the Board of Governors of the Federal Reserve System.) Developing — or emerging — nations with high inflation benefit the most from the practice, the study finds. For mature, developed nations like the United States, the benefits are far more subtle.

Many nations are warming to the idea of inflation targeting. By 2005, for example, eight industrial economies and 13 emerging ones had adopted full-fledged inflation targeting. Many others expect to make the move soon. But the case for inflation targeting has not been open and shut.

While studies have generally established a link between the practice and improved economic performance, they haven't proven that the former causes the latter. Indeed, stable and mature non-targeting nations, including the United States, have often done just as well or better without it. "[T]he ongoing debate on whether inflation targeting matters indicates that open questions remain, particularly on the comparative macroeconomic performance in inflation targeting countries, both over time and relative to nontargeting countries," write the authors of this study. "[W]hat really matters for successful monetary policy is establishing a strong nominal anchor. While inflation targeting is one way to achieve this, it is not the only way."

By looking carefully at a broad sample of 21 industrial and emerging-economy inflation-targeting countries over time, and comparing them with a control group of 13 industrial non-targeters, the authors conclude that a target does indeed improve economic performance but the effects vary dramatically depending on the type of economy that attempts it.

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For example: targeters trimmed their inflation rates from an average 12.6 percent before they adopted the practice to 4.4 percent after they did. Emerging economies saw the biggest drop — to 6 percent after they began targeting inflation. Developed industrial targeters saw a smaller decline but achieved a much lower rate of inflation: an average 2.2 percent. That impressive rate was bested, however, by developed non-targeters, who have averaged 2.1 percent since 1997. So the practice seems to provide the biggest help to nations that are struggling the hardest to tame inflation, while its effects on nations with more benign price appreciation are relatively small, sometimes negligible.

Take, for instance, an economy's reaction to an outside shock, such as a spike in oil prices. Targeting helps to reduce the inflationary impact in a given country, apparently because the practice enhances the central bank's credibility and stabilizes consumer expectations. But like the drop in inflation, the benefit varies.

Targeting nations, especially emerging governments that have achieved their inflation target, see the biggest improvement, according to the study. These economies actually see less impact from oil shocks than do non-targeting nations. By contrast, non-targeting nations seem to weather better an external shock caused by a sudden change in exchange rates.

Targeting can also help emerging nations go against the flow when inflation is raging worldwide, this study finds. The results are striking: currencies were 10 times less sensitive to foreign inflation after the host country had adopted targeting. And, they saw a further decline once they had tamed inflation. Curiously, more developed nations saw an increase in the inflation vulnerability of their currencies after adopting targeting, albeit at a much lower level than emerging nations.

Finally, this study looks at whether targeting makes economies work more smoothly — with more stable inflation and growth. Again, the results vary. Emerging nations made the biggest strides once they adopted targeting. Industrial targeters saw a slight improvement, but only because they faced smaller shocks to their economies in the first place. But, developed non-targeters did even better on both measures of economic efficiency.

The benefits of inflation targeting for non-targeting countries with low inflation and efficient economies are less obvious. The lack of a target does reduce transparency and raise uncertainty. Over the long term, the lack of a target also could reduce the credibility of a central bank if it's not seen as being held accountable to a standard. While it is wrong to say that inflation targeting always helps, the authors conclude, it doesn't seem to hurt in too many cases and may help to stabilize inflationary expectations in an uncertain future.

— Laurent Belsie

Current Account Surpluses and the Correction of Global Imbalances

Not all economists believe that the U.S. international deficit is a bad thing, arguing that it signifies Americans' preference for investment and growth over merely savings. Yet many worry that the current account deficit, which is nearing one trillion dollars, or 7 percent of GDP, is unsustainable. These observers speak of a "savings glut" among America's trading partners. Accordingly, these economists maintain that accelerated growth among those trading partners is the most desirable way to correct the imbalances. Still, the impact of such growth, and in particular its degree and rapidity, remains conjectural.

In **On Current Account Surpluses and the Correction of Global Imbalances** (NBER Working Paper No. 12904), NBER Research Associate **Sebastian Edwards** examines the historical evidence on current account adjustments in surplus countries, with particular attention to whether large surpluses are persistent. He also analyzes and evaluates the process and speed through which large surplus countries have reduced their imbalances.

By studying World Bank data collected over 35 years and covering some 160 advanced, transitional, and emerging countries, Edwards finds first what he calls an important asymmetry between current account deficits and surpluses. That is to say, many more countries have deficits than have surpluses. Moreover, while over the past 35 years, on average, only 28 percent of all countries ran surpluses during a given year, that figure has grown significantly in the last few years. During 2003–4, for example, almost 40 percent of countries enjoyed surpluses. The most marked changes have been in Asia, which has seen a current account reversal of more than 5 percent of GDP between 1997 and 2003–4. Of course the most notable nation with positive foreign savings is China — but in recent years fully 70 percent of all Asian nations have been showing surpluses. Indeed, the growing U.S. deficit has been financed by an ever-greater number of countries.

> "Large current account surpluses exhibit very little persistence over time, and … very few large countries have persistently large surplus-to-GDP ratios … This is significant because many economists believe that sudden reductions in foreign countries' surpluses could have a major and unsettling impact on the value of the dollar."

Edwards also determines that large current account surpluses exhibit very little persistence over time, and that very few large countries have persistently large surplus-to-GDP ratios. He notes that surpluses are more persistent in the Middle East and North Africa, mainly reflecting the recent jump in the price of oil. But even so, Edwards notes that the only truly long-term high surplus nations of any importance are Singapore and Switzerland. The fact that large countries don't seem to run high surpluses persistently, Edwards says, is consistent with the notion that, in order to finance the increasingly large U.S. deficit, a growing number of small and medium-sized countries must run surpluses. In addition, the lack of persistence suggests that the majority of countries that do run large surpluses do so only for limited periods.

Moreover, the data show that large surpluses are slightly more persistent than large deficits. However, the degree of persistence of both types of imbalances is low. At the same time, large and abrupt reductions in surpluses are relatively rare, with their incidence fluctuating between 3.0 percent and 6.6 percent of all country years. This is significant because many economists believe that sudden reductions in foreign countries' surpluses could have a major and unsettling impact on the value of the dollar.

Edwards finds that the incidence of surplus adjustments has been largest in the Middle East and smallest in the most advanced countries. Furthermore, surplus adjustments have been associated with mild real exchange rate appreciation and with deterioration in the terms of trade. At the same time, the behavior of interest rates, inflation, and economic growth is unclear in the periods surrounding major surplus adjustments.

Current account balances meanwhile have been associated with business cycles, real exchange rates, fiscal imbalances, and a country's net external position. All of these variables, Edwards observes, enter into the current account equation with the expected sign, and their coefficients are significant. He uses panel data to investigate the relationship between the business cycle and the current account in various countries, paying special attention to how sensitive current account balances have been to expansion in real GDP growth relative to its long-term trend. His analysis suggests that a decline in growth relative to a long-term trend of 1 percentage point results in an improvement in the current account balance — either higher surplus or lower deficit — of one quarter of a percentage point of GDP. These results indicate that a realignment of global growth — with Japan and the Euro Zone growing faster and the United States moderating its growth — would have only a modest impact on the current global imbalances. This, in sum, suggests that, even if there is a realignment of global growth, the world is likely to need significant exchange rate movements to eliminate global imbalances.

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— Matt Nesvisky

Ranking Affects the Financial Resources of Public Colleges

It is widely believed that the United States has the highest quality system of higher education in the world. However, some statistics are alarming: despite the rapid rise in tuition and heavy subsidies from government and private contributors, only 54 percent of freshmen graduate with a bachelor's degree within six years. This gives rise to a long-standing question: how do we motivate colleges to achieve and maintain quality?

Ranking colleges and other non-profit services, though difficult, has become increasingly popular. Quality rankings feature prominently in national magazines, and some governments even construct and publicize "quality report cards" for hospital care and education. Of course, the national magazine rankings have the potential to reach a much larger audience than simply prospective consumers. And, while better-informed consumers may motivate for-profit firms to lower prices and/or to improve quality, the rankings of non-profit services may deliver new information to their contributors as well, and thus reshape the behavior of non-profit firms via a different channel.

Every fall, the *U.S. News & World Report* (USNWR) publishes its "America's Best Colleges" issue, generating an enormous debate about the pros and cons of college rankings. The wide circulation of the USNWR college rankings issue reaches a much larger audience than prospective students alone. The "America's Best Colleges" issue drives up USNWR's typical newsstand sales by 40 percent, reaching an end audience of 11 million people.

> "College quality ranking information leads to increases in expenditure in public colleges, most of which are funded by more state appropriations per student. State appropriations per student are more responsive to USNWR rankings exposure if a state has more citizens who are politically active, care about higher education, and buy USNWR from the newsstand."

Since virtually all four-year colleges (including universities) in the United States are non-profit, contributions from governments and private donors account for more than half of their total revenue. This is especially true for public colleges, where the state government is the largest contributor (40–50 percent of the total revenue) and tuition payments are small (15–17 percent of total revenue). The non-consumer audience for rankings of public colleges thus ranges from state governments that are directly responsible for allocating appropriation funding to public colleges, to college alumni who value the reputation of their former school, to the voting public who may not attend college but have a keen interest in higher education because of the positive spillovers from educational attainment. These audiences all directly influence the amount of financial resources allocated to colleges, and their preferences may be reflected in tuition policy, admission criteria, the profile of the faculty, and the campus activities of a college.

Thus, college rankings have the potential to steer colleges towards quality improvement, but does it work? In **The Power of Information: How Do U.S. News Rankings Affect the Financial Resources of Public Colleges?** (NBER Working Paper No. 12941), authors **Ginger Zhe Jin** and **Alex Whalley** focus on public colleges and examine the impact of USNWR rankings on a college's financial resources per student. The authors ask to what extent and through what mechanism college rankings work. They find that college quality ranking information leads to increases in expenditure in public colleges, most of which are funded by more state appropriations per student. State appropriations per student are more responsive to USNWR rankings exposure if a state has more citizens who are politically active, care about higher education, and buy USNWR from the newsstand.

A number of caveats underlie these findings, though. For example, the funding increase in response to the USNWR exposure may affect college output, since recent research has shown that college completion rates are positively related to resources per student. However, another study has shown that accountability awards to secondary colleges in California have little impact on student achievement. So, the authors suggest that a worthwhile extension of their study would be to estimate the direct effect of USNWR ranking exposure on college completion rates. These estimates would be important in beginning to understand the implications of their findings.

Since financial resources per student represent only one dimension of college quality, another important avenue for future research would be to examine whether there is any evidence of a college "gaming response" to the rankings. If it is less costly to improve on-paper quality (as defined in the ranking algorithm), then USNWR rankings may distort college behavior away from improving true quality. To have a sense of whether this is an important concern, more extensive data is required, so that both true quality and on-paper quality can be measured separately. The response of alumni giving to the USNWR ranking exposure represents a possible case of such a response, since both the fraction of alumni giving and the total dollars donated by alumni are a component of the USNWR definition of quality, but the actual resources donated by alumni are much more likely related to college quality than the fraction of alumni donors.

The authors suggest that it is too early to draw any clear implications from their current findings. While they believe that responses in the financial variables they find represent real resources, and are not just manipulated statistics on paper, it is not clear whether the response of state appropriations is socially optimal. Because the pressure to improve comes from public attention to media news, state governments may react to improve the dimensions emphasized in the news (for example, expenditure per student), but do nothing or even reduce efforts in improving more obscure items, such as faculty research.

— Les Picker

Europe's Lagging Service Sector

Europe's failure to develop the kind of thriving service sector that has transformed the U.S. economy, a deficiency for which high taxes are largely to blame, is the main culprit behind the fact that over the last fifty years, hours worked in Europe have declined by almost 45 percent compared to hours worked in the United States. That's the conclusion of NBER Research Associate **Richard Rogerson** in **Structural Transformation and the Deterioration of European Labor Markets** (NBER Working Paper No. 12889). He finds that over the last half a century, European economies have suffered from a form of arrested development.

Rogerson observes that, typically, as a modern economy develops, employment is concentrated first in agriculture, then it moves to manufacturing, and finally, to services. Europe seems to have made it through the first two phases but then fumbled the transition to the service sector. Rogerson believes that this lack of service sector maturation goes a long way toward explaining the deterioration of European labor markets where, for some time now, unemployment rates have far exceeded those for the United States.

> "At the same time that changing technology creates an economic force leading to greater hours worked in the service sector, Europe raises taxes, thus creating an opposing force that encourages services to be provided outside the market."

From Rogerson's perspective, analysts seeking to understand why European unemployment rates in the 1970s abruptly increased relative to those of the United States have failed to take a longer view of the situation. While most have looked for economic shocks during the 1970s that might explain the problem, Rogerson believes it's necessary to broaden the lens and consider a period that starts in 1956 and runs through 2003. Also, Rogerson contends that a better way to understand the relative health of a labor market is to look at hours worked, not just unemployment. He finds that from 1956 to 2003, there is a steadily broadening chasm between hours worked in the United States versus Europe.

"Whereas the differences in unemployment rates emerge in the mid-1970s, the decline in hours of market work in Europe relative to the U.S. begins in the mid-1950s and continues at a fairly steady rate until the mid-1990s," he writes. "Hours of work in France, Italy, and Germany (Europe's largest economies) decline by more than 45 percent relative to the U.S."

The problem, according to Rogerson, is not with the lag one sees in the 1950s. Europe's economies in the mid-1950s were not as developed as the United States, as measured by labor productivity. Yet over the next 45 years, they seemed to be closing the productivity gap. So, why the lower amount of work? A closer look shows that while Europeans eventually matched U.S. employment rates in agriculture and industry, as of 2000 the employment rate in Europe's service sector was only 70 percent of the U.S. level. "In 2000, almost all of the difference in hours worked are accounted for by differences in the service sector," he writes. "As Europe catches up to the U.S. in terms of overall productivity, it does not develop a market service sector of the same magnitude."

Rogerson views Europe's relatively anemic service sector as a by-product of a European tax rate that is 15 to 20 percent higher than that of the United States. "The reason that Europe fails to develop a service sector similar to the U.S. is that at the same time that changing technology creates an economic force leading to greater hours worked in the service sector, Europe raises taxes, thus creating an opposing force that encourages services to be provided outside the market," he writes.

In other words, while in the United States it's now the norm for people to pay professional providers for services such as child care, elder care, cooking, cleaning, home repairs, and yard maintenance, Europeans — with taxes taking more of their disposable income — are more likely to do these things for themselves. Rogerson call this "home work" as opposed to "market work." And, he notes that there is evidence that if one adds up the hours Europeans spend doing "home work" (which in the United States is more likely to be handled by service providers), it significantly offsets the differences in market work.

Rogerson shows that if the United States were to adopt Europe's level of taxation and spending programs, time allocations would "change dramatically." They would look more like Europe's, in that a big chunk of "market work" hours would shift to "home work" hours with, presumably, a commensurate increase in unemployment.

— Matthew Davis

Measuring Happiness and Satisfaction

To design effective social and economic policies, policymakers need a measure of individuals' "well-being." Yet while such things as real Gross Domestic Product, lifespan, height, and the incidence of cancer can be counted, it is a much more complicated task to objectively quantify psychological well-being and happiness. For example, recent statistical research has shown that countries like Denmark, Ireland, and the Netherlands are particularly happy, while nations such as Germany, Italy, and Portugal are less happy. However, one could argue that words such as "happiness" or "satisfaction" cannot be communicated unambiguously and in exactly the same way across countries, so it is not easy to know whether such cross-national well-being patterns are believable.

In **Hypertension and Happiness across Nations** (NBER Working Paper No. 12934), co-authors **David Blanchflower** and **Andrew Oswald** draw upon data on 15,000 randomly sampled individuals from 16 countries, and on other larger samples, to develop a measure of well-being related to the incidence of high blood pressure. They find evidence to suggest that happier nations report fewer blood-pressure problems. And, this seems to be true regardless of the dataset used in the analysis. Nor do the results seem to be caused by differing numbers of physicians across countries.

> "Happiness among American men and women reaches its estimated minimum at approximately ages 49 and 45 respectively."

The authors' findings in this study rest on three assumptions: first, that it is reasonable to treat their survey evidence on high-blood-pressure problems as a proxy for true measures of hypertension. Second, that people report high blood pressure in a more objective way than they report levels of happiness. Third, that the patterns they find are not merely the product of something special for this particular sample of nations.

Of course, it is possible that the results of this study are not valid because an inherently cheery nation will be optimistic about everything. However, it is hard to believe that someone told by their doctor that they have high blood pressure would have an incentive to conceal or misreport that. For researchers in general, the attraction of a blood-pressure question in surveys is that it relies on medical facts given to the individual, and thus seems valuably different in character from conventional subjective questions about well-being. Furthermore, the authors point out that while psychological health cannot be measured easily, it is nonetheless high in Denmark and low in East Germany. While happiness and hypertension are linked, more research remains needed on how such connections may operate.

In **Is Well-being U-Shaped over the Life Cycle?** (NBER Working Paper No. 12935), **Blanchflower** and **Oswald** study happiness and life-satisfaction data for half a million Americans and Europeans. They draw two main conclusions from the data: first, that psychological well-being moves along a U-shaped curve as we age. Second, that there are important differences in the reported happiness levels of different age groups.

The authors suggest that reported well-being is U-shaped in age. Happiness among American men and women reaches its estimated minimum at approximately ages 49 and 45 respectively. Among European men and women, life satisfaction levels are at their minimum at ages 44 at 43 respectively. The authors emphasize that, because their research controls for many other influences upon happiness and life satisfaction — including income, education, and marriage — these results should be read as truly describing well-being.

By definition, the authors caution, their study has one important limitation. The international datasets that they use do not follow the same individuals over the years. They also note that what truly causes the U-shaped curve in human well-being, and the noticeable regularity of its mathematical shape in different parts of the industrialized world, is not currently known. Potential answers, some more plausible than others, include the following: first, that individuals learn to adapt to their strengths and weaknesses, and in mid-life quell the unfeasible aspirations of their youth. Second, that cheerful people live systematically longer than those who are miserable, and that the U-shape somehow traces out, in part, a selection effect. Third, that a kind of comparison process is occurring — for example, I may have seen school-friends die and as a result eventually come to value my blessings during my remaining years. There are likely to be other explanations for the U-shaped effect, too.

— Les Picker

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