A Note on the Phillips Curve in South African and other Text Books

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Abstract

Rossouw and Marais (2018) describe misrepresentation in textbooks widely used in South Africa, regarding the work of A.W. Phillips on his famous curve. The value of their discussion is noted, and it is suggested that the matter can be taken further. The current note provides further related information on these matters.

Keywords: Phillips curve; textbooks

Rossouw and Marais (2018) described Phillips (1958) as considering the determination of wage change in terms of the level of unemployment, the rate of change in unemployment, and the rate of change of prices. His principal finding was of a relationship between unemployment and the change in money wages.[1] They correctly noted that Phillips's idea was that wage change was to be explained by unemployment (and other factors), in contrast to the implication of Fisher (1926) where causation ran from (price) inflation to unemployment. And they said that Phillips drew no policy implications from his work. That last point is not quite correct since Phillips (1958, 299) pointed to implications as to the level of unemployment required to stabilise either wages or prices; in the latter case, assuming a steady rate of productivity growth. Rossouw and Marais were correct, though, in so far as the point they meant to make is that Phillips drew no implication to the effect that inflation might bring benefits in the

1 Rossouw and Marais (2018, 2) say the relationship was between wage change and "the rate of change of unemployment," but that is surely just a drafting error.

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form of lower unemployment. They also correctly noted that Lipsey (1960), following up on the work of Phillips, was also very cautious about policy implications. Rossouw and Marais then raised the question of the origin of the idea of a policy trade-off, noting that Samuelson and Solow (1960) are often identified as that source, and cited an argument from Forder (2014, chapter 2) questioning this view. They then discussed the argument of Hall and Hart (2012) to the effect that the relevant Samuelson and Solow data did not actually point to a monotonic negative relationship between inflation and unemployment at all.[2] Rossouw and Marais said a number of undergraduate textbooks which are widely used in South Africa misrepresent both Phillips's work and the facts. On the former matter, most are shown to describe Phillips as pointing to a relationship between *inflation* and unemployment, and as suggesting a trade-off relevant to policy, whereby unemployment could be lowered by inflationary policy. In respect of the latter, they presented data suggesting that there is no such relationship in South African data.

As Rossouw and Marais suggested, it surely ought to be that textbooks would report the facts correctly, and Phillips's analysis, as they said, concerned a generally very plausible idea of relationship between wage change and unemployment, not one between inflation and unemployment,[3] and he did not suggest the existence of a trade-off. They said:

> This analysis shows the importance of educators using original sources in teaching technical aspects of disciplines. The theoretical underpinnings of research can be distorted by secondary sources, as is the case in this instance. Teaching these distorted interpretations results in the perpetuation of misinformation. (Rossouw and Marais (2018, 10)

The analysis of Rossouw and Marais is salutary, but their findings by no means unique to South Africa, and not just confined to textbooks either. The widespread belief that Phillips discovered an "exploitable trade-off" and that his (supposed) views were widely accepted are shown to be quite incorrect in Forder (2014). The representation of the matter in a range of British and American textbooks was then considered in Forder (2015). In finding misrepresentations of Phillips's work commonplace, the conclusions are somewhat in the spirit of the line of thinking of Rossouw and Marais. It was further argued, however, that the kind of misrepresentations identified by those authors appeared only in 1978. A number of British and American textbooks of that date or later clearly convey that Phillips had an idea of a permanently exploitable trade-off, and this had led to inflationary policy in the 1960s. It was further shown, however, that even in earlier editions of the same textbooks there was no trace of such views.

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2 Rossouw and Marais (2018, 4) actually cite working paper versions of both Forder and Hall and Hart.

3 As further discussed in Forder (2019), a rarely noted point is that Phillips (1958) suggested the functional form and parameter values of the relationship in the United Kingdom had been unchanged for nearly 100 years. That, plainly, is rather less plausible.

A little more can also be added to Rossouw and Marais's discussion of Samuelson and Solow (1960). On the one hand, their reliance on Hall and Hart to suggest that Samuelson and Solow's data should not have led to the idea of an exploitable Phillips curve is misplaced. The reason is that Hall and Hart's econometrics is tendentious. Samuelson and Solow drew a downward sloping curve relating inflation and unemployment. They captioned the chart as showing a curve based on the last 25 years of data, but elsewhere they had identified the data points relating to the post-War period as the ones of interest. Their downward sloping curve matches those data points well. Hall and Hart's non-monotonic estimation comes from the previous 25 years. Something is wrong, but the natural view is that Samuelson and Solow were considering the data that would be most relevant to the likely outcomes in the 1960s—that is the post-War data, not a mixture of that and some data points from the Depression, War years, and so forth. In contrast, Hall and Hart (2016) defended their view principally on the basis of their report of a 50-year old recollection of Solow as to what had been done.

On the other hand, though, there is the question of whether, as is commonly said in the literature, Samuelson and Solow's paper was influential in promoting inflationist policy. Hall and Hart clearly convey that it was. They say: "The Samuelson-Solow Phillips curve provided the economic rationale for expansionary government policies in the 1960s" (Hall and Hart 2016, 67). Clearly, Hall and Hart took the view that it did have such an effect.[4] Actually, the evidence is very much that it did not. As Rossouw and Marais (2018, 5) clearly indicate, I argued (Forder 2014, 35) that there is no reasonable case that Samuelson and Solow thought there was a stable trade-off between inflation and unemployment. There is a slightly different question as to whether Samuelson and Solow favoured inflationary policy, and on that, they sent rather a mixed message. One crucial point is that in so far as they seem to advocate the acceptance of inflation, it is certainly not on the basis that they believed there was a stable curve. A considerably more interesting point, though, is that in an extensive review of discussions of Samuelson and Solow's paper in the years shortly after it, I was unable to find authors who both thought that they did advocate inflation, and thought they were right to do so. On the basis of this finding it was concluded that while some seem to have read Samuelson and Solow as advocating inflation, none *learned* from them that it would be a good idea. The claim that they had been influential in promoting inflationist policy was, furthermore, something that seems to have appeared in the literature only well into the 1970s—prominently with Nobay and Johnson (1977). The key point about Samuelson and Solow, then, is not that their analysis was mistaken in one way or

4 In replying to the point in Forder (2016) that Samuelson and Solow had no such influence, Hall and Hart (2016, 58) said that they had not accused them of having an intention to advocate inflation. Clearly that does not address the point, and furthermore is contrary to the view they conveyed when, as noted by Rossouw and Marais (2018, 5), they raised the question of whether—if they had estimated the curve in Hall and Hart's way—Samuelson and Solow would still have "argued for an exploitable trade-off" (Samuelson and Solow, 1960, 67).

another (if it was), but that despite presumption to the contrary, including that of Hall and Hart, they had no inflationist influence in any case.

Rossouw and Marais (2018) have discovered for themselves a distortion of history in undergraduate textbooks, and rightly deplored it. The problem is not limited to South African textbooks. Their enquiry into those textbooks nevertheless complements the study of textbooks of Forder (2015). It would be interesting to see a study of South African policy of the 1960s and 1970s, which might similarly complement the brief discussion of British and American policy in Forder (2014) and of Australian policy in Beggs (2015); and perhaps complement those in finding that the Phillips curve also never had the influence on policy that later stories—and later textbooks—claim.

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