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WHAT IS GOODHART'S LAW?

5/99

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Q: What is Goodhart's Law?

A: 'Goodhart's Law' is the proposition 'that any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes'.

Q: Which means?

A: It means that statistical regularities must always be interpreted with the utmost caution.

Q: Because they might be spurious?

A: Statistical regularities might be entirely spurious but, although this is an important consideration, this is not the point of Goodhart's Law.

Q: So what is?

A: Goodhart's Law' refers to statistical regularities which, although significant (non-spurious) are heavily dependent upon the institutional structures that are operative during the period when the data were collected.

Q: Could you give an example?

A: Well, the exchange of wedding rings is part of the marriage ceremony, and most likely those rings will have been purchased some time in advance of that ceremony. That being the case, you would expect to find a statistical correlation between the number of rings bought in (say) April and the number of weddings which take place in June ...

Q: ... and the number of births a year or so later.

A: Maybe, although the correlation between marital status and parental status is less strong than it was in earlier years. However, it would provide a useful illustration if we accept your proposition.

Q: So, if we have a 'statistical regularity' whereby births vary according to the number of wedding ring sold a year or so earlier. Clearly, this is not a spurious correlation. So what are we supposed to make of this?

A: Right. Let's go to the next stage. This regularity having been noted, let us now suppose that 'pressure is placed upon it for control purposes'. For example, suppose that policy-makers think that it would be sensible to achieve a reduction

in population growth; and suppose that the most obvious means to achieve this is that of restricting the sale of rings.

Q: Neat.

A: Not really. A ring is not an essential part of the marriage ceremony and marriage is not a prerequisite for parenthood. As likely as not, our 'observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes'.

Q: Goodhart's Law! Marriages will take place anyway.

A: Just so.

Q: I'm beginning to understand. So, who is Goodhart and of what relevance is the law to economics?

A: Professor Charles Goodhart moved to the London School of Economics after working for many years as Chief Economic Advisor at the Bank of England. In 1997 he was invited to join the Bank of England as an outside member of its Monetary Policy Committee.

Q: And the relevance of his law to economics?

A: The general relevance (if I might quote Professor Goodhart directly) is that 'as the statistical relationships derived from the past depended on the particular kind of policy aim pursued by the authorities over the period considered, there would be no guarantee of their exact continuation in the future, should that policy be altered'.

Q: You (or, rather, he) have now lost me.

A: More slowly then: many statistical relationships are determined by behaviour which is decided upon in the context of policy regimes which are in place at the time. And if the policy is changed, they so will that behaviour. Does that make sense?

Q: It seems reasonable.

A: If policy is changed, individuals' may behave differently and the statistical relationships which are derived from that behaviour are also changed.

Q: That also makes sense; in which case it must surely be very difficult to determine in advance the most likely impact of policy changes.

A: Quite so; and - as we have touched on in another conversation - economic forecasting is made very difficult.

Q: Are you saying that economic analysis cannot be used to forecast the likely impact of new policy?

A: It's not quite as bad as that. Economic analysis can be used in a meaningful way, providing that it meets the requirements of what is known as 'the Lucas critique.'

Q: This is becoming complicated.

A: Professor Robert Lucas argued that, if the statistical relationships upon which economic analysis is based are influenced by the policy which is in place during

the period of that analysis, then these relationships cannot be used to predict the outcome of some alternative economic policy regime.

Q: That sounds like Goodhart's Law.

A: Yes, it does. I agree with you. They are very similar. I suppose the difference is that Goodhart's Law is somewhat more pessimistic than the Lucas critique.

Q: How so?

A: Professor Goodhart may well have overstated his prognostication in order to achieve greater impact. However, unlike Goodhart's Law, the Lucas critique offers a short life-line to economic forecasting.

Q: And how does it do that?

A: Professor Lucas argues the position might be saved if economic analysis is formulated in such a way that the relationships analysed would be unaffected by any policy change. This is achieved by analysis which incorporates the likely reaction of rational individuals (to that policy change). Economic forecasts based upon such analysis address the issues raised by the Lucas critique.

Q: Which is ... I'm sorry ...

A: .. that the statistical relationships upon which the analysis is based must incorporate the likely reactions of rational decision-makers. If so, economic forecasts may still prove incorrect, but for reasons other than those raised by the Lucas critique.

Q: And this is now generally accepted?

A: The argument has not been refuted.

Q: So it is accepted?

A: Professor Lucas has had a profound influence upon economists' views as to the kind of statistical analysis which can be used to support a case for policy changes. There will always be some who ignore, or who are ignorant of a telling case, but those who accept the Lucas critique believe it to be absolutely essential for economic analysis to take explicit account of the reactions (to policy changes) of rational decision-makers.

Q: Your repeated reference to rational decision-makers reminds me of another of our conversations, when I asked you about rational expectations?

A: And so it should. Professor Lucas did much to promote the policy implications arising from the hypothesis of rational expectations.

Q: I'd like to check back on my notes. Can we stop there?

A: Perhaps we should.