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From Cointegration to Mr. Isaacs: The Employment Problem in South Africa

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Abstract

[Excerpt] In the summer of 1999, I first visited South Africa at the request of the South African government. The government was concerned about the nation's drastic unemployment situation, which in recent years has been estimated at 12-20% using the standard ILO definition (not working but actively looking for work) and which reached as high as 34% when account is also taken of persons who did not work, did not look for work, but who reported themselves willing to take a job if one were offered. Government believed that unemployment was caused by excessively high wages—excessive, that is, relative to market-clearing levels—so they asked us to estimate, inter alia, the wage elasticity of demand for labor. Note the role of both types of research here: government's core hypothesis came both from talking to business-people, who claimed that high wages discouraged them from employing more workers, and from prior econometric estimates.

Keywords

South Africa, unemployment, quantitative analysis, qualitative analysis, wages, labor demand

Disciplines

African Studies | Labor Economics | Labor Relations

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I should like to use this workshop on quantitative and qualitative approaches to economic analysis to talk about my ongoing work on South Africa's employment problem. The two approaches have played an important role not only in research but also in policy.

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Our terms of reference, given to us by the government, was to estimate the wage elasticity of demand for labor. We painstakingly gathered time series data on the key variables (employment, wages, user cost of capital, and per capita national income), started with time series regressions, and then moved on to cointegration techniques. Alas, the series proved not to be cointegrated—an unhappy state of affairs for concluding anything about the elasticity of demand for labor. So perhaps the reason we found no cointegrating relationship is that the structure changed during the period.

Qualitative analysis came to the fore again. The problem, we were told, is that beginning around 1990 (a key date in South Africa: the release of Nelson Mandela from prison, marking the imminence of majority rule government), what they were calling in South Africa "the labor hassle factor" suddenly became a major issue. Labor demand fell, it was said, because of a shift to a new regime, under which it would be difficult to dismiss a worker if business conditions worsened or if the worker did not perform adequately.

So we looked for a structural break in the data in 1990, tested it econometrically, and voila: there it was. The following figure shows the regression line fit to the 1980s and 1990s together and to the two decades separately:

No wonder we found a weak relationship between employment and wages: we had tried to fit a line to an inverted-V relationship! The line fit terribly, but look how closely two separate regression lines fit. What does this mean? We concluded that the 1990s were indeed different from the 1980s, but in a different way from what had been thought. In the 1980s, real wages rose and employment did too. In the nineties, real wages continued to rise but employment fell. A neoclassical interpretation makes perfect sense: In the 1980s, wages were being pulled up by supply and demand, which is why employment was rising, but in the nineties, wages were being pushed up by trade unions and other institutional forces, moving the economy along a negatively-sloped labor demand curve, driving employment down.

Of course, the wage-employment loci shown in Figures 1–3 are neither labor demand curves nor labor supply curves. Given our interest in labor demand elasticities, we therefore estimated labor demand equations as functions of real product wage, real user cost of capital, and real output, including an AR(1) term for autocorrelation. And indeed the estimated labor demand elasticities in the private sector were found to be quite different in different time periods: -0.11 for 1980–9, -0.35 for 1990–3, and -0.53 for 1994–8.

Our econometric analysis thus led us to the conclusion that part (but only part) of the reason for falling employment in South Africa...
From Cointegration to Mr Isaacs:
The Employment Problem in South Africa

GARY S. FIELDS
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Figures 1 and 2.

Relationship between Employment and Real Product Wage, 1980s and 1990s


Figure 3.

Relationship between Employment and Real Product Wages, 1980s and 1990s Together

From Centralization to Mr. Isaacs
Figure 3.
Relationship between Employment and Real Product Wages, 1980s and 1990s Together

Q-Squared

was exogenously rising real wages. Another part was due to a rising wage elasticity of demand for labor. The policy implication of this finding was that the country faced a tradeoff between earnings levels of those employed and the number employed and that a national dialogue was needed to decide where the socially optimal point on the employment-earnings frontier would be for South Africa.

At the same time, qualitative research was undertaken on business problems in South Africa, and here is what it showed. According to a research study conducted jointly by the Greater Johannesburg Metropolitan Council and the World Bank, corporate CEOs in South Africa identify the leading constraints to business growth as crime and violence, labor regulations, interest rates, exchange rates, corruption in government, skills shortage, and tax rates. The leading priorities for remediying this situation, according to these CEOs, are for the national government to promote an efficient and flexible wage policy in the labor market, maintain macroeconomic policy stability, and promote an efficient and flexible interest rate policy. Note well: Labor regulations are number two on the list of problems and wage policy is number one on the list of remedies. Remember, though, that high wages and regulated labor markets are by no means the same thing.

Which brings us at last to the case of Mr. Isaacs. I met Mr. Isaacs in December 2000 in a Rexall Pharmacy on the Camps Bay Road outside of Cape Town. In Mr. Isaacs' shop is a 1998 newspaper article lauding him for being in the Guinness Book of World Records as the oldest practising pharmacist in the world: 93 years old. So we got to talking about his work, his business, and the larger South African society. Mr. Isaacs told me the following story. For many years, he ran his pharmacy with the aid of an assistant. Thirty-two years ago, he said, he took her on for a month and she stayed with him for thirty-one years, until she got too old and sick and had to retire. Since then, he said, he runs the business all by himself. "Why," I asked, "do you do it all on your own?" and here is how he answered. "You see, Professor, if I take on an assistant in these times and that person doesn't work out, I can't dismiss him/her. I don't want to be stuck with somebody like that, so I'm doing business on my own." This from a 95-year-old man in a country with 34% unemployment!

From Cointegration to Mr. Isaacs

So why is unemployment in South Africa so tragically high? Above market-clearing wages? The labor hassle factor? Quantitative research reveals the importance of the first, qualitative research the importance of the second. Both are true. There can be no question that both types of research are needed.

If I do my homework before going to a country, I find that nine out of ten of my prior hypotheses are borne out, but it is the tenth one that makes the trip worthwhile. At the same time, I fear that we run a great risk if, once in the field, we start by asking people what problems they perceive and what should be done about them. Why? Because people respond to perceived private benefits and private costs, given their frame of reference and knowledge. However, policy must be based on social benefits and social costs, which usually diverge from the private ones.

So where do we start? For me, quantitative research is the most informative place to begin. If I had to do only one kind of research, that is what I would do, and I would do it as carefully as my skill with statistical and econometric methods would allow. But I don't have to do one kind of research, nor does anyone else, which is why it is good that we get away from our Stata commands and out in the field every once in a while.

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