Nicholas Kaldor's Insights into the Applied Economics of Growth

(or Why I Became a Kaldorian)[1]

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Introduction

We are celebrating today the life and work of Nicholas Kaldor on the thirtieth anniversary of his death on 30th September 1986. Kaldor was one of the most distinguished Hungarian economists of the twentieth century who ought to have more recognition in his native country, even though most of his academic life was spent in the United Kingdom.

I knew Kaldor well in the last years of his life between 1979 and 1986. In the mid-1970s, I had already decided that I would write an intellectual biography of him – I found him such an original and interesting economist, and decided there was a Kaldorian economics to be written. In 1979, I spent a sabbatical term in King's College, Cambridge. I attended Kaldor's lectures; I talked to him, and finished reading the whole of his published work – over 250 articles and books. Then in the academic year 1985-86, I spent a whole year in Cambridge, working in his house in Adams Road to sort out his papers; read his correspondence with other economists, and to interview him extensively about his ideas and events of long ago. My biography of him was published in 1987 (Thirlwall, 1987).[2] When Kaldor died, undoubtedly economics lost one of its most original and controversial economists of the twentieth century. We are all mortal, of course, but not many live the rich intellectual and political life that Kaldor enjoyed. Below, I give some brief biographical details, and highlights in Kaldor's academic and political life.

Kaldor left Budapest in 1927 to study economics at the London School of Economics (LSE). He graduated with a first class honours degree in 1930. He became the favourite pupil of Lionel

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[1] This article is based on a Lecture given at the Cornivus University, Budapest, on 30th September 2016 celebrating the life and work of Nicholas Kaldor on the 30th anniversary of his death.
[2] There are now two more intellectual biographies of Kaldor: Targetti (1992), and King (2009).

Robbins, a young Professor from Oxford who was appointed in 1929 to replace the American, Allyn Young from Harvard, who had died from pneumonia. Young was Kaldor's most influential teacher, and later in life Kaldor was to use over and over again Young's 1928 paper on 'Increasing Returns and Economic Progress' (Young, 1928) in several attacks on equilibrium theory.[3] After graduation, Kaldor was given a research studentship to study the economic problems of the Danubian States, and Kaldor's first published paper in English in the *Harvard Business Review* was on this topic (Kaldor, 1932).

In the 1930s, Kaldor made several major theoretical contributions to the theory of the firm (Kaldor, 1934a, 1934b, 1935); to capital theory (Kaldor, 1937); to welfare economics (Kaldor, 1939); to trade cycle theory (Kaldor, 1940), and to the Keynesian revolution (Kaldor, 1939). In 1985, after Kaldor had delivered the Hicks Lecture in Oxford (Kaldor, 1986), Sir John Hicks wrote to Kaldor saying 'your 1939 paper on 'Speculation and Economic Stability' was the culmination of the Keynesian revolution in theory; you ought to have had more honour for it.' Kaldor was one of the first converts at the LSE to the Keynesian revolution in 1936, along with Abba Lerner and Ursula Hicks.

In the 1940s, during the war, the LSE was evacuated to Cambridge, and Kaldor collaborated with Keynes on aspects of war finance and national income accounting. He also made major contributions to the two Beveridge Reports; the first in 1942 on social insurance, and the second in 1944 on *Full Employment in a Free Society.*

In 1947 Kaldor resigned from the LSE to become the first Director of the Research and Planning Division of the newly established Economic Commission for Europe (ECE) based in Geneva headed by the Swedish economist and civil servant, Gunnar Myrdal. Kaldor assembled a very impressive team of economists, including Robert Neild; Esther Boserup; Helen Makower; Hal Lary; Tibor Barna, and P.J. Verdoorn. Kaldor was responsible for writing the Annual Reports outlining the economic conditions and trends in the economies of Eastern and Western Europe. At the end of 1949 he left the ECE to become a Fellow of King's College, Cambridge (in the footsteps of Keynes who died in 1946) and a Lecturer in the Faculty of Economics.

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[3] While searching in Kaldor's house, I found a complete typed set of lecture notes that Kaldor had taken from Young in 1928. They are interesting because Young was Edward Chamberlin's PhD supervisor in Harvard, and Young was teaching monopolistic competition theory at the LSE long before Chamberlin's book on monopolistic competition was published in 1933. The lectures are published in the *Journal of Economic Studies* 1990 edited by Roger Sandilands.

In 1951, he was invited to become a member of the Royal Commission on the Taxation of Profits and Income. As a result of this experience, immersing himself in tax matters, he became one of the world's leading tax experts. It led directly to his classic book *An Expenditure Tax* (Kaldor, 1955), and invitations from several developing countries to be a tax adviser, starting with India in 1956 and followed by Ceylon (now Sri Lanka) (1958); Mexico (1960); Ghana (1961); British Guiana (now Guyana) (1961); Turkey (1962); Iran (1966), and Venezuela (1976). His tax reform proposals often led to violent protests, but Kaldor was unapologetic : 'Progressive taxation is, in the end, the only alternative to complete expropriation through violent revolution'.

In the mid-1950s, Kaldor became one of the joint architects of the so-called post-Keynesian growth and distribution school, along with Joan Robinson, Richard Kahn and Luigi Pasinetti. In a series of path-breaking papers, Kaldor (1955, 1956, 1961) attempted to extend Keynesian ideas and insights to the long run, and at the same time to challenge neoclassical growth and distribution theory emanating from the Massachusetts Institute of Technology in Cambridge Massachusetts pioneered by Robert Solow, Paul Samuelson and Franco Mogdigliani. Throughout the late 1950s and into the 1960s there were fierce debates between Cambridge, England and Cambridge, Massachusetts with no obvious 'winner', but they set the economics profession alight.

In the 1960s, Kaldor turned away from the pure theory of growth to the applied economics of growth with his famous Inaugural Lecture in Cambridge entitled *Causes of the Slow Rate of Economic Growth of the United Kingdom* (Kaldor, 1966) where he lays out a series of growth 'laws' that will be discussed below. His interest in the applied economics of growth was partially inspired by his appointment in 1964 as Special Adviser to the Chancellor of the Exchequer, James Callaghan, in the Labour government of Harold Wilson from 1964-70. He was concerned, as many were, with the slow rate of growth of the UK economy compared to the UK's European neighbours. Many explanations were proffered, but Kaldor's explanation was the slow rate of growth of the manufacturing sector, and the excessive growth of the service sector with lower productivity. He carried on as Special Adviser to the Chancellor of the Exchequer at the beginning of the second Labour government in 1974, but resigned in 1976, disillusioned with economic policy-making at the time. He had been given a peerage in 1974 and was able, therefore, to comment on contemporary economic affairs from the benches of the House of Lords. He did so

very vigorously and very effectively during the Conservative administration of Mrs Thatcher from 1979.[4]

In the 1970s, he led world-wide the intellectual assault on the doctrine of monetarism that had spread with the virulence of a plague from the United States under the influence of Milton Friedman (see Kaldor, 1970,1982). He lost the battle, but won the war because Monetarism Mark 1 (Friedman monetarism) is dead, and Monetarism Mark 2 (the new classical macroeconomics) is also dead.

In the 1980s, it was the challenge to equilibrium theory that mostly preoccupied him. He had already launched an attack in 1975 with his paper 'What is Wrong with Economic Theory?' (Kaldor, 1975), and this was followed by 'Equilibrium Theory and Growth Theory' (Kaldor, 1979); 'The Role of Increasing Returns, Technical Progress and Cumulative Causation in the Theory of International Trade and Economic Growth' (Kaldor, 1981), and his powerful Okun Lectures at Yale University in 1985 *Economics Without Equilibrium* (Kaldor, 1985).

In 1969, the first year of the Nobel Prize in Economics, the *Financial Times* (8th August) reported that Kaldor was on a short-list of ten candidates for the honour, including Milton Friedman, Paul Samuelson, James Meade, Francois Perroux and the Russian Leonid Kantorovich, but he was never to receive it. *The Economist* newspaper (20th January 1979) once described him, however, as the best known economist in the world not to have received the Nobel Prize; and I think there is some truth in this.

Structure and Demand Matter for Economic Growth

Now I will describe how I became a Kaldorian, as a prelude to discussing Kaldor's insights into the applied economics of growth in which the structure of production and demand matter for the long run growth of economies, in contrast to orthodox neoclassical theory which deals with a one-good economy in which structure and demand don't matter, and in which supplies of factors of production and technical progress are exogenously given.

What attracted me to Kaldor first of all was not his growth and distribution models of the 1950s, which were purely theoretical, but his Inaugural Lecture in Cambridge in 1966 entitled *Causes of the Slow Rate of Economic Growth of the United Kingdom* (Kaldor, 1966), followed by

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[4] See his *Economic Consequences of Mrs Thatcher* (Kaldor, 1983).

his Frank Pierce Memorial Lectures at Cornell University, also in 1966, published as *Strategic Factors in Economic Development* (Kaldor, 1967). In these lectures he gives a structural explanation of why growth rates differ between countries, singling out manufacturing industry as 'the engine of growth'. In the United Kingdom's case, he attributed slow growth to what he called 'premature maturity' by which he meant the exhaustion of the supplies of labour from agriculture to provide labour for manufacturing industry before a high level of productivity in industry had been reached – in contrast to other European countries. As a young Lecturer at the University of Kent looking for an intellectual home, these lectures struck a chord, and I incorporated the ideas into my own lecture notes on growth and development theory. I now had a counterweight to the unsatisfactory assumptions of neoclassical growth theory. I believed him to be wrong that the UK's fundamental growth problem was a shortage of labour for manufacturing industry (and Kaldor soon changed his mind on this), but not on his emphasis on the fact that the production (and demand) characteristics of industry are different from those of land-based activities and services – namely that manufacturing industry is characterised by increasing returns (static and dynamic returns to scale) while most activities outside of manufacturing are subject to constant or diminishing returns. Kaldor's view, which he never changed, was that it isn't possible to understand growth rate differences between countries, or differences in the levels of development between countries, without making this fundamental distinction between what types of activities countries specialise in.

Out of these 1966 lectures came three growth laws. Firstly, manufacturing is the engine of growth in a causal sense – not simply because manufacturing output is a part of total output. i.e.

$$g_{gdp} = f_1(g_m) \qquad f_1' > 0 \qquad\qquad (1)$$

where g_{gdp} is the growth of GDP and g_m is the growth of manufacturing output. This is testable. The reason manufacturing is the engine of growth is that it induces productivity growth both within manufacturing itself, and also outside the manufacturing sector. This leads to the second and third laws.

The second law is that manufacturing output growth induces labour productivity growth within manufacturing because of static and dynamic returns to scale. Static economies refer to economies of scale, and dynamic economies refer mainly to learning by doing and embodied technical progress as more capital is accumulated in the process of growth. i.e.

$$p_m = f_2(g_m) \qquad f_2' > 0 \qquad\qquad\qquad (2)$$

where p_m is productivity growth in manufacturing. This second law is often referred to as Verdoorn's Law after a paper published by P.J. Verdoorn in the Italian journal *L'Industria* in 1949 (Verdoorn, 1949) showing this relationship across a sample of European countries between the two World Wars. Interestingly, Verdoorn was one of Kaldor's staff in the Research and Planning Division of the ECE in the late 1940s, but no further research was done on the 'law' for seventeen years until Kaldor revived it, and only one reference was made to it by Arrow in his classic paper on the economics of learning by doing (Arrow, 1962). Since 1966 there has been a mass of research on Verdoorn's Law – all supportive – although some studies also find a Verdoorn effect in some activities in the service sector.[5]

The third law states that manufacturing growth induces productivity growth outside of manufacturing because if there are diminishing returns to labour, with the marginal product of labour less than the average product, a reduction in labour will raise the average product. i.e.

$$p_{nm} = f_3(g_m) \qquad f_3' > 0 \qquad\qquad\qquad (3)$$

where p_{nm} is the growth of productivity in non-manufacturing.

All three laws have been extensively tested and have strong empirical support across developed countries; developing countries, and across regions within countries. For example, see Hansen and Zhang (1996) for a study across the regions of China; see Necmi (1999) for a panel data study across several developing countries; see Libanio (2010) for a study across the countries of Latin America, and Wells and Thirlwall (2003) for a study across the countries of Africa. Structure matters for economic performance.

These results, of course, have policy implications particularly for poor countries which want to accelerate economic development for the reduction in poverty. What is the role of the State in promoting manufacturing industry? What is the role of industrial policies? Is there a case for protection? If so, should it be by tariffs, subsidies, or selected credit to new industries? The late development economist, Ajit Singh, once said to me that as a student of Kaldor, Kaldor taught him three things: first, developing economies must industrialise; second, they can only industrialise by protection, and third, if anyone says otherwise, they are being dishonest.

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[5] In 1999 there was a conference in Genoa celebrating the 50th anniversary of Verdoorn's paper, out of which came a book: J.McCombie, M. Pugno and B. Soro (2003), *Productivity Growth and Economic Performance: Essays on Verdoorn's Law* (London: Palgrave-Macmillan).

But what drives manufacturing output growth in the first place? In Kaldor's thinking, it is agricultural growth in the early stages of development and export growth in the later stages. These are the two fundamental sources of autonomous demand for manufacturing output to offset leakages of income from the manufacturing sector for the purchase of food from agriculture and imported inputs into industry. This thinking is the basis of his two-sector model of industry and agriculture in which the terms of trade play a crucial role. If the industrial terms of trade are 'too high', the growth of industry is demand constrained because the agricultural sector lacks the purchasing power to buy manufactured goods. If the industrial terms of trade are 'too low', industrial growth is supply constrained because industry doesn't have the profits to invest. Kaldor lectured on this model for many years in Cambridge, and it formed paprt of his Hicks Lecture (Kaldor,1986) and his 1986 Mattioli Lectures (Kaldor,1996). Thirlwall (1987) and Targetti (1985) attempt to give a more formal structure.

Regional Export-Led Growth

The second paper which struck an intellectual chord was Kaldor's address to the Scottish Economic Society in 1970 entitled 'The Case for Regional Policies' (Kaldor, 1970). Here, at the regional level, he switches focus from the structure of production in a closed economy to the role of exports in an open regional context in which the growth of exports is considered the major component of autonomous demand (to which other components of demand adapt) which sets up a virtuous circle of growth working through the Verdoorn effect – similar in character to Gunnar Myrdal's theory of circular and cumulative causation in which success breeds success and failure breeds failure (Myrdal, 1957). This is one of his challenges to equilibrium theory that free trade and the free mobility of factors of production will necessarily equalise economic performance across regions or countries. Structure still matters, but it is now the demand characteristics of goods that matter most, not the supply characteristics of production. It makes a difference to economic performance of regions or countries whether they produce and export cabbages or computers. The model Kaldor put forward was a purely verbal one, but Dixon and I formalised it in a paper in 1975 entitled 'A Model of Regional Growth Rate Differences on Kaldorian Lines' (Dixon and Thirlwall, 1975). The model has four equations that can be solved for the equilibrium growth rate. The first makes output growth a function of export growth (and the more specialised

regions are, the greater the importance of exports). The second equation makes export growth depend largely on a region's changing price competitiveness and the growth of income outside the region. The third equation gives the rate of change of a region's prices as the difference between wage growth and productivity growth. Lastly, labour productivity growth is partly determined by the growth of output itself through static and dynamic increasing returns, captured by Verdoorn's Law. In equation form, the propositions may be specified as (t is a time subscript):

$$g_t = \Upsilon(x_t) \tag{4}$$

where g_t is the growth of regional output, and x_t is the growth of exports.

$$x_t = \eta(p_{dt} - p_{ft}) + \varepsilon(z_t) \tag{5}$$

where p_{dt} is the growth of domestic prices; p_{ft} is the growth of foreign prices measured in a common currency; z_t is the growth of income outside the region ; η (< 0) is the price elasticity of demand for exports, and ε (>0) is the income elasticity of demand for exports.

$$p_{dt} = w_t - r_t \tag{6}$$

where w_t is the growth of wages, and r_t is the growth of labour productivity.

$$r_t = r_{at} + \lambda(g_t) \tag{7}$$

where r_{at} is autonomous productivity growth and λ is the Verdoorn coefficient.

Substitution of equation (7) into (6) and the result into (5) and (4) gives the equilibrium growth of regional output as:

$$g_t = \frac{\Upsilon[\eta(w_t - r_{at} - p_{ft}) + \varepsilon(z_t)]}{1 + \Upsilon\eta\lambda} \tag{8}$$

Remembering that $\eta < 0$, growth is shown to be negatively related to domestic wage increases, but positively related to foreign price increases and autonomous productivity growth. Growth is also positively related to the growth of external demand and the size of the Verdoorn coefficient. It is the Verdoorn coefficient (λ) that makes the model 'circular'; but whether growth is 'cumulative' (i.e. departs further and further away from equilibrium) depends on the behaviour of the model out of equilibrium. To make the model dynamic, and to assess whether it is stable or not, it is sufficient to put a one-period time lag into any of the equations. Dixon and I chose to put a one-period lag in the export growth equation giving $x_t = \eta(p_{dt-1} - p_{ft-1}) + \varepsilon(z_{t-1})$. Successive

substitution as before gives a first order difference equation, of which the general solution to the homogenous part is:

$$g_t = A \, (\, -\Upsilon\eta\lambda)^t \tag{9}$$

where A is the initial condition. Whether the model is stable or not out of equilibrium depends on the value of $(-\Upsilon\eta\lambda)$. If exports grow twice as fast as output, $\Upsilon = 0.5$. A typical value for the Verdoorn coefficient (λ) is 0.5. In this case the price elasticity of demand for exports (η) would have to exceed minus 4 for $(-\Upsilon\eta\lambda) > 1$, and for there to be 'explosive' growth. It is rare to find aggregate price elasticities of demand for exports as high as that, but in any case we don't observe in practice regional *growth* rates *diverging* – only *levels* of per capita income. This suggests that regional growth rate differences that are observed are associated with differences in regions' equilibrium growth rates largely determined by differences in the income elasticities of demand for exports (ε) associated with regional differences in the structure of production and trade: whether regions specialise in primary production or manufactured goods and sophisticated services.

In fact, if the Verdoorn effect is ignored, and it is assumed that regional competitiveness stays constant, equation (8) becomes:

$$` \qquad g_t = \varepsilon \, (z_t) \tag{10}$$

Regional growth is determined by the growth of income outside the region and by the types of goods exported reflected in the income elasticity of demand for exports.

It is a weakness of the original Kaldor model, however, that there is no balance of payments constraint. In practice, the growth rate in equation (10) may cause import growth to be faster than export growth which is unsustainable in the long run. A balance of payments constraint is easily incorporated, however (see Thirlwall and Dixon, 1979). The export growth equation (5) can be modified to include the rate of change of the exchange rate (e) :

$$x_t = \eta(p_{dt} - p_{ft} - e_t) + \varepsilon \, (z_t) \tag{11}$$

We can then add an equation for the rate of growth of imports (m):

$$m_t = \psi(p_{ft} - p_{dt} + e_t) + \pi \, (g_t) \tag{12}$$

where ψ (<0) is the price elasticity of demand for imports and π (>0) is the income elasticity of demand for imports.

Setting equation (11) equal to (12), and substituting equations (6) and (7) into (11) gives the balance of payments equilibrium growth rate of:

$$g_t = \frac{(1+\eta+\psi)[w_t - r_{at} - p_{ft} - e_t] + \varepsilon z_t}{\pi + \lambda(1+\eta+\psi)} \qquad (13)$$

If there is no Verdoorn effect ($\lambda = 0$), and relative prices measured in a common currency remain unchanged, equation (13) collapses to :

$$g_t = \varepsilon z_t / \pi \qquad (14)$$

Equation (14) is the classic centre-periphery model of Prebisch (1959) where the growth of one region or country relative to others (g_t / z_t) is equi-proportional to the ratio of the income elasticity of demand for exports and imports (ε/π).Equation (14) can also be shown to be the dynamic analogue of the static Harrod trade multiplier, Y = X/m, where Y is the level of output ; X is the level of exports, and m is the marginal propensity to import (Harrod, 1933 ; Thirlwall, 1982). Kaldor first revived the Harrod trade multiplier in a letter to *The Times* newspaper 15th March 1977, and argued that it is more important than Keynes's investment multiplier for understanding the pace and rhythm of economic growth in an open economy (Kaldor, 1981). Or, to put it another way, it is more difficult for a country to rectify an import-export gap than it is to rectify a savings-investment gap.

Of course, regions within countries don't experience classic balance of payments problems in the sense that an exchange rate comes under pressure, but if import growth exceeds export growth and capital transfers (domestic and international) do not finance the difference, the balance of payments constraint will show up in slow growth and rising unemployment. Regional problems are balance of payments problems (Thirlwall, 1980) as we witness in the peripheral countries of the Eurozone today. A large part of the sovereign debt and private banking crisis in the Eurozone stems from the heavy borrowing by the deficit countries of Greece, Spain, Portugal and Italy from the surplus countries of Germany, the Netherlands and Austria (see Priewe, 2012). The free movement of capital facilitates the financing of deficits, but exposes countries to adverse internal and external macroeconomic shocks if the flows are debt-creating.

An Alternative Explanation of Kaldor's First Law of Growth

From the two canonical models of Kaldor outlined above, it might be said that there is an uneasy connection between the closed economy model of growth rate differences based on the

structure of production, and the open economy model in which export growth is the driving force. There is an uneasy connection, but it is easy to see that manufacturing as the engine of growth is also a reduced form of export-led growth in which GDP growth is a function of export growth, but export growth is a function of manufacturing output growth. In other words:

$$g_{gdp} = a_1 + b_1 (x) \qquad (15)$$

$$x = a_2 + b_2 (g_m) \qquad (16)$$

and substituting (16) into (15) gives:

$$g_{gdp} = (a_1 + b_1 a_2) + (b_1 b_2) g_m \qquad (17)$$

Kaldor's first law of growth is a reduced form of two structural equations and depends on the elasticity of GDP growth with respect to export growth (b_1), and the elasticity of export growth with respect to manufacturing output growth (b_2). A colleague and I have tested these relationships across a sample of 89 developing countries over the period 1990-2011 (Pacheco-Lopez and Thirlwall, 2015).[6] Figure 1 shows the relationship between GDP growth and manufacturing output growth (Kaldor's first law).

Figure 1. Association between GDP growth and manufacturing growth, 1990-2011
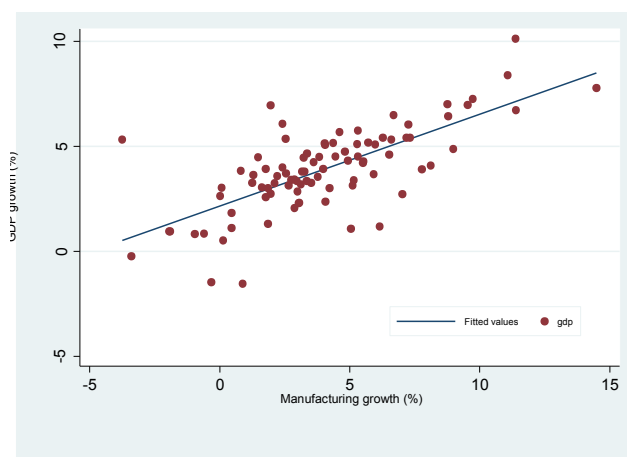

The estimated equation is (t-values in brackets):

$$g_{gdp} = 2.16 + 0.43 g_m \qquad : r^2 = 0.50$$

$$(9.07) \quad (9.43)$$

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[6] The data was also disaggregated between low income, lower-middle income, and upper-middle income countries and also between the continents of Africa, Asia and Latin America, but only the aggregate results are presented here.

Figure 2 shows the relation between manufacturing output growth and export growth.

Figure 2. Association between export growth and manufacturing growth, 1990-2011
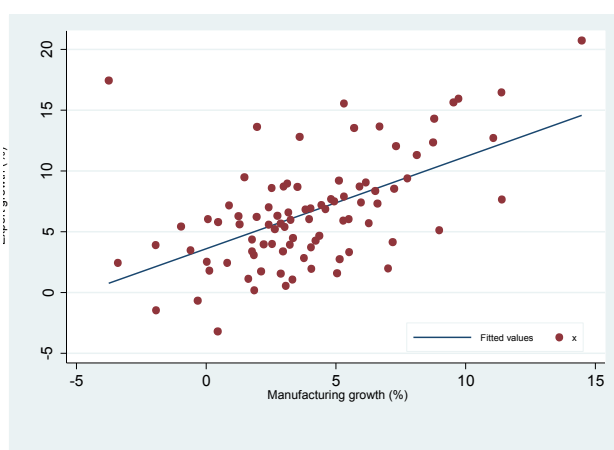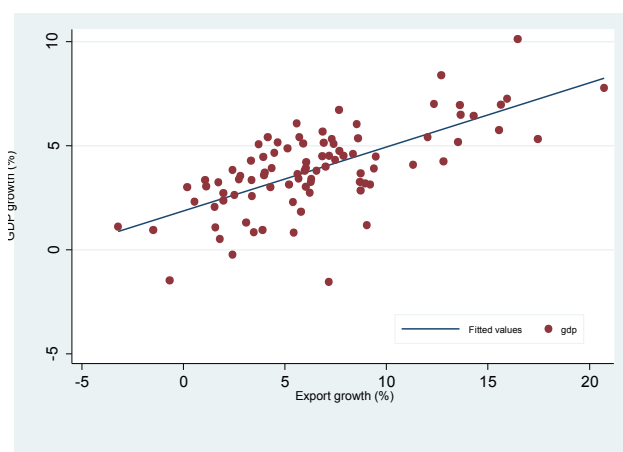

The estimated equation is:

$$x = 3.59 + 0.75g_m \quad : \quad r^2 = 0.30$$

$$(5.7) \quad (6.19)$$

The strong positive relation should occasion no surprise. For any given growth of world income, the growth of exports will depend on the structure of production and the income elasticity of demand for different products. Export growth is endogenous in this sense and is likely to be related to the growth of manufacturing output since all manufactures are potentially tradable. Primary products are also potentially tradable, but they do not have the same production and demand characteristics. Their demand growth in international trade is low (Engel's Law). Some services are tradable, but many are not, and their income elasticity in world markets is not likely to be as high as for medium- and high-technology manufactured goods.

Figure 3 shows the link between export growth and GDP growth.

Figure 3. Association between GDP growth and export growth, 1990-2011

The estimated equation by two-stage least squares is:

$$g_{gdp} = 0.09 + 0.57x \; : \qquad r^2 = 0.50$$

$$(0.21) \quad (9.43)$$

There are three major reasons for expecting *a priori* a close link between export growth and GDP growth. First, there is the neoclassical supply-side argument which focuses on the static and dynamic gains from trade and the externalities that the export sector can confer on the non-export sector and the rest of the economy (Feder, 1983). Exports also allow the import of inputs and investment goods that may be more productive than domestic resources, thus increasing the supply capacity of the economy. Secondly, if domestic demand is constrained by a shortage of foreign exchange, faster export growth will help relax that constraint. All components of demand have an import content which need to be paid for, and only exports can do so. Exports are a unique component of demand in that respect (McCombie, 1985). Thirdly, export growth may set-off a virtuous circle of growth, as outlined earlier.

The results of this research across a wide sample of developing countries support the work of Hausmann, Hwang and Rodrik (2007) on 'What You Export Matters' which shows a close association between what they call EXPY and growth rate differences across countries. EXPY is a

weighted average of what they call PRODY which measures the income level that each good produced is associated with. If a low income country (like China) produces high-tech goods associated with high income countries, it will have a high PRODY and a high EXPY and will grow fast – as China has done. What this close association between EXPY and GDP growth is picking up is the higher income elasticity of demand for high technology manufactured goods.

Conclusion

Kaldor was one of the most original, inspiring and controversial economists of his day; a unique figure in twentieth century economics. His many contributions to economic theory and applied analysis will ensure his place in the history of economic thought. It is perhaps a matter for regret that he never wrote a grand Treatise in the tradition of Smith, Mill, Ricardo, Marx or Marshall. The reason he did not do so was not because he lacked the vision, intellect, or ability to write, but because he succumbed to the temptation to become involved in too many projects at the same time, and never found the time to sit down for long concentrated periods which such a *magnum opus* requires. My own debt to him will be his contribution to the applied economics of growth, and his stress on the importance of structure and demand in understanding the different levels of development, and differences in the growth performance, of countries. His 1966 Inaugural Lecture started the break with one-good models of the orthodox neoclassical mainstream, and now occupies centre-stage in serious discussions of how to accelerate the progress of developing countries (see Szirmai, Naude and Alcorta, 2013).

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