# How Economies Grow: Alice Amsden and the Real World Economics of Late Industrialization

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I would like to thank the Department of Trade and Industry and TIPs for inviting me to give this inaugural memorial lecture in honor Alice Amsden. Alice is the single most influential scholar in development economics of the last 30 years. She had a key role in shaping my own intellectual trajectory, so it is a particularly poignant task to give this memorial lecture in her honor. I had the good fortune to meet and talk with Alice many times over the years, and to benefit from both her scholarly prowess and extraordinary sense of humor. Indeed, it is difficult to remember Alice without a smile; her unorthodox and incisive wit entertained as much as her intellect informed.

Accompanying Alice's unorthodoxy was an unflinching willingness to stand up for what she thought. She did not hesitate to challenge the status quo nor any trends that she felt were wrong-headed, however popular. A few years ago, for example, she came to the University of Vermont, a guest of the Gund Institute for Ecological Economics and Sustainability. Her host asked Alice her views on these matters. She responded that the key issue was jobs—people's well-being through employment was key, and sustainability had to accommodate. It was not the response her sponsor wanted, but Alice's response nevertheless.

She articulated similar views regarding what she believed to be the overemphasis on poverty alleviation and educational investments as primary development strategies. She said "poverty alleviation has become a cult but it is no substitute for development. It does not alter structures of the economy that lead to poverty." And she argued that education without job creation was equivalent to a return to Say's Law, that is, the outdated belief the supply of educated workers will automatically create its own demand for them—a deeply flawed view, in her mind (Amsden 2010).

On a more humorous note, Alice once mentioned to a colleague of mine that when her book, *The Rise of the Rest* (2001), was almost ready for press, she requested that Vladimir Putin endorse the book. A bit unconventional, as was her way. Alas, Putin didn't respond, but her work was appreciated anyway.

Let me turn now to Alice's intellectual gift to all of us. I would like to focus on her contributions in three areas: methodology, the role of wages in development, and the superiority of nationally-owned firms over foreign-owned firms.

*Methodology*

Years ago, in a classic experiment in the psychology of perception, Gestalt psychologists Jerome Bruner and Leo Postman asked subjects to identify individual playing cards that were briefly flashed before them.

The psychologists slipped a few anomalous cards, such as a black queen of hearts, into the deck. Until the exposure time was considerably lengthened, the subjects almost always confidently identified these anomalous cards as normal. That was because, the researchers argued, people will use what they already know to understand things (Bruner and Postman 1949, originally discussed in Folbre 1985). This makes them blind to what they actually observe.

Thomas Kuhn, in his classic book, *The Structure of Scientific Revolution* (1970), uses this example to elaborate that discoveries in the sciences are rare because our vision is obscured – we only see what we expect to see, selectively using real world data to confirm our prior views and ignoring information that doesn't fit.

Such, I would argue, has been the state of development economics since the 1980s.

About that time, mainstream development economics returned to the fold of Adam Smith's theoretical framework on the centrality of free markets and limited government as the means to stimulate economic growth. Despite the variety of economic structures and external conditions in developing countries, the mainstream in particular has touted this one-size-fits-all strategy for all developing countries for the last 30 years.

Adam Smith based his theory, of course, on countries on the verge of industrialization more than 200 years ago. Today's economic conditions are very different. In particular, today's developing economies are late to the game and, as late industrializers (LI), face very different external conditions from those Adam Smith referenced. LIs have stiff competition from the earliest industrializers that dominate the technology frontier. Capital is also is more mobile than in the time of Smith, and trade is no longer in just finished goods.

The impact of these conditions on the development process appear to have been invisible to most mainstream economists, who have only observed in the experiences of LIs a validation of Adam Smith and David Ricardo. Much of mainstream development theory, it would appear, has been developed with little data from the real world.

Nothing could be further from Alice's method. She used the real world as her source of data, and had the extraordinary insight to extract from these data a comprehensive theory of late industrialization.

I came to understand the significance of Alice's work during a formative period of time I spent in Haiti in the mid 1980s. At the time, I was a Master's student, doing an internship with USAID. My boss, Jim Walker, regularly came into my office, tossing cables on my desk to read. They were written by Reagan administration economists in Washington, DC and outlined the wonders of free markets, free trade, and limited government. Their prime example of a success story was South Korea. Market liberalization was seen as the solution for the rest of the developing world, too. In the case of Haiti, USAID was particularly keen on pushing it to remove agricultural import tariffs and to move into assembly factory production to fuel export growth.

This development strategy seemed problematic to me. These assembly firms were footloose, foreign-owned factories whose economic interest in investing in Haiti was to access an unskilled and untrained source of cheap labor. Although that led to job creation, the problem was that, given the low sunk costs, these firms were willing and indeed did abruptly close down and move to other low-wage countries the instant efforts were made to raise wages or taxes.

Most importantly, there seemed no way for the Haiti's of the world to escape from the low-wage, low-productivity trap they were in. That is, there was no vehicle for these assembly factories to serve as the catalyst for the kind and manufacturing experience and structural change that would lead to the rapid productivity growth so necessary for economic development.

That process–how to move up the industrial ladder in a world of intense competition with some pretty sophisticated front-runners–was one that neoclassical economics could not offer much insight into. Put another way, despite very sophisticated models, there was really no real theory of structural change and productivity growth.

While I knew something was missing from the neoclassical growth story in Haiti, I wasn't sure quite what it was. I left Haiti in 1988 to pursue a Ph.D. and in 1989, Alice Amsden published a book called *Asia's Next Giant: South Korea and Late Industrialization*. That book highlighted Alice's breadth as an economist. She was first and foremost a great theorist. Her theory of late industrialization is, in my view, unrivalled in the field of economic development for its breadth and intricacy.

She was also great economic historian. To formulate the theory of late industrialization, one had to understand how this period differs from previous periods. In that regard, Amsden recognized that context mattered and that structural change needed to move to a knowledge-intensive economy with high productivity and income required a very different set of tools than earlier industrializers experienced.

Her methodology was a welcome antidote to armchair theorizing that has inhibited the relevance of economics as a social science for so many years. Her primary methodological tool was fieldwork – talking to the people about whom she was theorizing. Alice could talk at length and in extraordinary detail about the people, the industries, the specific factories and enterprises in the dozens of developing countries that informed her thinking. Her quantitative approach was largely an extensive use of descriptive data as a method for verifying her hypotheses and claims. She did not ever, or rarely used, quantitative models. She may have done regressions, but I never saw them. Alice showed that one does not need highly technical math to be great thinker and to make an impact. This isn't to eschew the usefulness of quantitative methods. Indeed, many of us have used those tools to test Alice's hypotheses.

In terms of methodology, Alice's approach was very similar to that of fellow economist Barbara Bergmann. Both were feisty women, studying and working as economists in a male-dominated economics world. They knew each other, though didn't interact much. I imagine that they would have nevertheless reveled in the real world approach to economics that the other took, had they spent more time together. A quote from Bergmann is one that Alice would have liked:

> "The impoverished factual content of our thought doesn't embarrass us economists. We are used to it. But it is somewhat embarrassing to explain explicitly to non-economists that we find things out by sitting and thinking and mulling over a few factual crumbs, and that the systematic firsthand observation of economic functioning has no place whatever in economics.

*Wages and Development*

The central goal of Amsden's theory of late industrialization, based on the experiences of a number of countries—South Korea, Taiwan, Thailand, India, China, and Brazil—was to identify how firms could shift from primary resources to the production of more sophisticated goods, based on the development of knowledge-based assets. This, in her view, is the key determinant of long-term development and growth.

To achieve that requires manufacturing experience. This in turn requires something specific for late industrializers—borrowing and applying technical knowledge. Borrowing and applying frontier technologies is not easy, however. Alice identified several necessary ingredients. First, she emphasized the importance of export capability. Why is this so? To purchase or license frontier technologies, countries must export in order to earn foreign exchange. And to be competitive, firms need practice. That is, she argued, à la Kaldor, that productivity growth depends on learning by doing. This requires product demand, whether from domestic consumers in protected markets, or foreign markets, helped by import barriers and export subsidies.

And because costs had to be kept low to promote demand and exports, profits would have been razor thin. In response, the state had a pivotal role to play, by employing incentives to convince firms to move into strategic and often risky industries in the production of goods for which they have no experience and could not compete on their own—what Alice called, "getting prices wrong."

Firms might also be able to boost exports by disciplining labor—lowering wages and maintaining labor market flexibility, a strategy the World Bank and IMF have touted these last 25 years. But Alice argued this was a flawed strategy for late industrializers. She made the case best, using the experience of South Korea.

True, she stated, if wages were lowered, export prices would fall. But because late industrializers are so far behind developed economies, wages would have to fall a lot. And wage cuts are no guarantee that skills will rise or that total costs will fall. In the long run, she argued, falling wages in poor countries are no match for rising productivity in rich ones.

What she had to say about wages was fundamentally important—that if you lower wages as a way to gain competitiveness, you could be lowering productivity and raising costs. Why?

Alice argued that much of the learning in late industrialization happens on the shop floor. It is not enough to rely on engineers to ensure that technology is transferred. Even if firms can buy or lease a technology or purchase a turnkey factory, the knowledge about how the production process works and how to improve that process is not codified. Despite the existence of detailed instructions, some nuances and tricks in the production process can only be learned by practice, adaptation, and experimentation. Workers as a result are key players in the process of learning how to use new technologies. They are central to the process of adapting the blueprints of new technologies to actual production on the shop floor. Therefore, how the production process works and how to improve on that process requires that workers exercise their intelligence on the shop floor. Workers have a fundamentally important role in the development of knowledge assets.

And for that reason, higher, not lower wages, are needed to stimulate productivity growth. In South Korea, Alice argued, they contributed to rapid productivity growth also because turnover was reduced and the skills workers acquired stayed with the firm.

It would be wrong if I failed to mention, however, that indeed, low wages—those of women—were part of South Korea's success. Alice recognized that women were segregated into labor-intensive jobs while men dominated in the non-tradables and capital-intensive export sector. Women's low wages contributed to rapid export growth that generated foreign exchange needed for the imported inputs into capital-intensive production. In this way, the story is much more complicated—low wages for women coupled with high wages for men were part of the South Korean success story, as they are today in a number of late industrializers (Seguino 2000). That said, low wages were not sufficient to promote growth. Much more was needed in the way of policy.

What other tools could be used to incentivize national firms to move into industries in which they had no experience and were therefore unable to compete nationally or in foreign markets? According to Alice, the state could beneficially use policy tools to create rents (excess profits) and to socialize investment risk in order to induce firms to move into strategic industries that would help to raise economy-wide productivity. Thus, as in South Korea and other late industrializers, the state could artificially raises profits by subsidizing energy, lowering taxes, and offering cheap credit. And of course, it could promise to bail out large firms in order to lower their risk of investment.

The policy challenge is that while subsidies generate rents, there is no guarantee firms would productively invest these excess profits.  Strategies are needed to ensure firms take the high road—that is, that they align their profit interests with the broader goals of society.

And here is a critical difference that distinguished Asian late industrializers from other governments that granted favors to large firms. These governments, to varying degrees, have used tools at their disposal to discipline capital as well as labor.

The case of South Korea is perhaps the starkest. The state used what Alice called reciprocal Control mechanisms to make sure that rents were converted into investments that raised productivity. This happened in two key ways. The government met monthly with the large conglomerates at which time they were required to report on whether they had met the investment and export performance targets set by the government. It was also an opportunity to discuss what the roadblocks they might be facing. And it was also a time to be held accountable – if they failed to make sufficient progress, they risked losing access to prized benefits that led to their rents – subsidized credit, energy and so forth.

Alice then identified, based on observation and a deep understanding of what it takes to move up the industrial ladder, a complex role for the government in late industrializing countries. First, the state must identify strategic industries whose development can lead to structural change and productivity growth. Second, it must then allocate subsidies and resources to firms to incentive them to invest in those industries, by ensuring economic rents and reducing (or socializing) risk. Third, it must monitor performance without getting cozy with economic elites, and finally, it must produce the public goods firms need to thrive – education, publicly-funded R&D, and good infrastructure.

In a word–or rather two words—they must develop an *industrial policy*. It is perhaps these insights on the role of the state that made Alice's work so unacceptable to the mainstream. They could not countenance that state interference could be beneficial, and sought to disprove her arguments at every turn.

The World Bank, for example, argued that although South Korea had intervened in markets, it had begun to liberalize trade and investment by the 1980s. It was free trade that was the source of its economic success, according to the Bank. Alice said that liberalization talk was just that—talk. Instead, she retorted in her inimitable way, "to assess the degree of openness in South Korea after liberalization is as hard as assessing the degree of godliness in a reformed heretic" (1989: 134). The point was, that while South Korea verbally appeased external pressures from the Bank, the US, and others, it continued to manage trade.

*Foreign and National Firms*

I would like to turn to another topic on which Alice had a lot to say—the developmental role of foreign multinationals. The mainstream view is that foreign firms contribute to development by bringing in foreign savings, best practice technology, and competition to domestic firms. Investment thus should be liberalized and indeed this is pretty much the central theme of how countries can move up the industrial ladder.

But Alice had a skeptical view of foreign direct investment (FDI), arguing that foreign-owned firms (FOEs) could in fact slow rather than enhance productivity growth (Amsden 2009). She called them bureaucratic dinosaurs.

In theory, she said, it should not matter whether firms were nationally- or foreign-owned. In a perfectly competitive world, their contribution to investment and productivity growth would be equal. But Alice argued FOEs produced abroad with inferior technology than used in the home country, abused transfer pricing, had a high import content of production, and interfered politically to improve their profit margins. FOEs, often invested in sectors with barriers to entry, and having first-mover advantage, crowded out national firms. They subsequently maintained all-important R&D activities at home.

And they were risk averse, taking on only safe investments overseas. They were likely to invest in resource extraction, primary goods, and services—but not in technologically dynamic sectors.

Late industrializers usefully restricted or regulated FDI. She noted, for example, that South Korea barred FDI in its early years. By the 1970s, the government relaxed FDI restrictions in order to expand its technological know-how in electronics. At that point, the government allowed FDI in electronics for a period of time but only as joint ventures. Fully foreign-owned firms were barred. This was important—this left space for the development of national entrepreneurial capability. And, unlike foreign firms, domestic firms could be disciplined to behave in ways that allowed their profit incentives to be aligned with the overall goal of economy-wide productivity growth.

In contrast, countries like Singapore relied heavily on FDI in manufacturing, and FOEs in a short period of time displaced national enterprises in the early years of industrialization. In my own research, I was intrigued by this difference in FDI policy and by the fact that manufacturing productivity growth South Korea was much more rapid than in Singapore's FOE-dominated sector. I pursued some research to explore whether this held for other semi-industrialized economies.

My hypothesis was that wage growth was slower in countries where FDI as share of investment was higher. Why? Workers' bargaining power in those countries was reduced by the mobility of foreign firms which could relocate if workers demanded higher wages. This threat effect held wages down (or what Alan Greenspan much later dubbed "the traumatized worker" effect).

With unit labor costs held in check due to firms' superior bargaining power, there would be less pressure on risk-averse foreign firms to innovate, via productivity-enhancing R&D, process innovation, or training. The result is slow productivity growth. In short, stagnant labor costs make firms "lazy."

I tested this hypothesis in some research on the impact of firm mobility in semi-industrialized countries—that is, late industrializers. What I found was that where FDI (both inward and outward) was a larger share of investment, wage growth was slower over the period 1975-2000. And productivity growth was slower as well (Seguino 2007). My results confirmed Alice's concern than FOEs were dead-weight and that the cultivation of national entrepreneurial talent is key to economic development.

Alice's theory of late industrialization came at a time in which, as I said at the beginning of this lecture, development economics was under the shadow of an increasingly rigid free market, free trade development theory.

Twenty-five years after the publication of *Asia's Next Giant*, market reforms are now widely perceived as having gone erroneously too far in reducing the role of the state in the economy to the detriment of growth. The crisis of 2008 has called into further question the salutary effects of liberalization of markets, trade, and investment, precisely in the countries that were the architects of the Washington Consensus.

There is now an increased willingness to consider an expanded role of the state but still little appetite for what Alice called "getting prices wrong."

And yet, those countries that have exhibited exceptional growth in recent years are Asian economies such as China, which have pursued *Amsden-omics*, along with those countries that have been pulled along by the export demand generated from Chinese growth and recipients of China's FDI. Indeed, it is remarkable that state-led growth economies have continued to expand, despite the malaise in rich countries.

For this and because of the dismal performance of globalization policies, Alice's work is highly relevant. I predict they will be influential in the future as well, as the stagnation from the Great Recession of 2008 continues in the rich countries. Milton Friedman, though not an economist Amsden rated highly, made an important observation years ago:

> "Only a crisis - actual or perceived - produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes the politically inevitable." (Milton Friedman, *Capitalism and Freedom*, 1962).

Our greatest tribute to Alice will be to keep her ideas alive and to extend them so that some day, perhaps even in our lifetime, they become the mainstream and indeed politically inevitable.

Alice represents the Black Queen of Hearts—the anomalous one in a deck of cards. Unlike other economists who are prone to see what their theoretical blinders expect them to see, Alice made visible what had remained invisible to others. For this, we owe her a huge intellectual debt.

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