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The problem: financing long-gestating development projects in LDCs

National development banks (NDBs) have played a dominant role in the provision of long-run investment financing for agriculture, industry, and infrastructure in the context of late development (Gershenkron, 1962; Amsden, 2001; Di John, forthcoming). Moreover, many potentially output and productivity enhancing ventures involve large scale economies that have long learning and gestation periods that make such projects *risky* for private investors.

As Alexander Hamilton noted in the context of the post-colonial United States: "capital is wayward and timid in lending itself to new undertakings…the State ought to excite the confidence of capitalists who are ever cautious and sagacious, and so overcome the obstacles that lie in the way of all experiments" (Alexander Hamilton, Report on Manufacturers, 1781).

State sponsored development banking that provides subsidised long-run credit is thus central to socializing risk and inducing risk-taking and learning (Amsden, 2001). Due to the lack of private sector capacity and commitment to financing the inherently risky ventures of late development, it is not surprising to find that NDBs are often the only source of long-run credit in LDCs, and form one of the main instruments of industrial policy.

Neo-liberal critics claim that state controlled subsidised credit leads to several problems, including: financial repression (negative interest rates that reduce the incentives to save); crowding out of private sector investment; relation-based governance that can generate 'insider privileges'; non-competitive markets, cronyism and corruption; and the misallocation of resources towards over-ambitious capital-intensive projects in labour-surplus economies. Their policy advice is to: liberalise the banking sector, attract foreign banking, allow private competitive markets to determine the interest rate, avoid capital controls, maintain fiscal and monetary discipline (i.e., balanced budgets and inflation targeting), create independent central banks insulated from political pressures, and adopt rules-based systems of financing to promote private stock and bond markets.

However, neo-liberal policy advice has some critical shortcomings. First, there is no historical evidence that effective catch-up strategies have been based on following neo-liberal policy advice (Gershenkron, 1962; Amsden, 2001). Second, private financial markets are subject to 'manias, panics, and crashes' (Kindleberger and Aliber, 2011), such as the Great Depression and the 2008 Financial Crisis among many other crises in advanced countries. Independent central banks, 'light touch' regulation and monetarist policies reigned supreme in the run-up to the 2008 financial crash. In general, the private financial sector seems subject to massive 'soft budget constraint'—since they are considered 'too big to fail'. In fact, taxpayers bail them out whenever they fail to the tune of trillions of dollars

The economic rationale for national development banks: theory and practice

In examining the late development process in Germany and Russia, Gerschenkron (1962) argued that catching-up occurs by undertaking more *capital-intensive* investment in individual plants, even though overall capital intensity of the backward economy is lower. In his analysis, investment banks and national development banks served as a *functional substitute* for stock markets and commercial banking, both of which financed (along with retained earnings) industrial investment in the forerunner country, Britain.

Germany (as a more advanced, but still backward economy) relied on relation-based private investment banking as the key to successful catch-up. Investment banks owned substantial shares in industrial ventures. Russia (as a much more backward economy) relied primarily on a state development bank to finance industrialisation. The key insight in this regard is that the stage of development matters for the appropriate type of development finance required. This position challenges the idea that late developers should adopt the 'best practice' of more advanced countries.

There are sound economic reasons as to why NDBs have enhanced the prospects of late development. Standard models of financing suggest that the private banking system is unlikely to be able to provide long-run financing on its own for such risky ventures without state coordination and guarantees (Dewatripont and Maskin, 1995; De Aghion, 1999). The logic of the basic model is as follows. Long-term projects involve large sunk costs requiring co-financing by several banks. However, each bank will tend to provide a limited monitoring effort in the knowledge that part of the marginal return from this effort will accrue to the other banks. But the resultant insufficient monitoring jeopardizes project profitability, thereby discouraging the co-financing of long-term projects. As a result, in a competitive banking system in a low-income economy, banks tend to underinvest in long-term projects.

This phenomenon suggests a role for a coordinating agency that can overcome free-rider problems and prevent 'short-termism'. Given the inadequate private provision of long-term finance, the coordinating agencies are often sponsored by national governments.

Historically, commercial banks proved unable to provide industry with long-term finance for two main reasons. First, they were unwilling to bear the inevitable risks associated with the financing of new enterprises. Second, they lacked *the specialized skills* required to deal with higher risk long-term investments. As noted by Sawyers (1957):

> ''The logically sound basis for the presumption against long-term commitments is that it is much more difficult to estimate a borrower's creditworthiness 20 years ahead than 6 months ahead. The factors relevant to creditworthiness are substantially different over the longer period and the capacity and experience required in the bank manager are of an altogether different order, an order it is not reasonable generally to expect unless he has specialized expert staff.''

There have been many *forms* of long-run investment financing that have served the same *function* of socialising the risks inherent in late development. The French experience in the 19th century, where significant developments in long-term state-sponsored finance occurred, provides the pioneering example. The creation in 1848–1852 of institutions such as the Crédit Foncier, the Comptoir d'Escompte and the Credit Mobilier, was particularly important. The involvement of the Crédit Mobilier in continental European railway investment was notable. The bank acquired substantial *expertise* in long-term finance as a result of railway investments. This expertise was then disseminated to other continental European banks in which the Crédit Mobilier held shares.

Of even greater importance than the outcome of the operations of the Crédit Mobilier were the intangible benefits, such as the imitated skills of the engineers and technicians that it sent abroad, the efficiency of its administrators and the organizational banking techniques that were so widely copied (Cameron, 1953). Indeed, one of the main reasons why private banking in LDCs cannot easily assume the risks of long-run financing is precisely their *lack of sectoral* expertise in assessing the risk and monitoring.

Historical evidence also suggests that bank-based business groups have been central to the catch-up processes in Germany, France, Italy, Sweden, Japan, South Korea, Taiwan and Israel (Khanna and Yafeh, 2007). Such *relation-based* financiers are able to take a longer-run view of catch-up investments (and therefore become more 'patient' investors) than either stock markets or independent commercial banks, both of which operate under impersonal, *rules-based* systems. There is also evidence that, when a dominant national development bank intervenes, co-financing arrangements and/or co-ownership with private financial institutions can enhance the returns to capital of state-led long-run financing (de Aghion, 1999).

It is important to note that the forms of financing by NDBs have changed over time. In France and Germany in the 19th century until World War II, government support for private emerging development banks took the form of share capital provision, loans at lower-than-market interest rates, provision of state guarantees underwriting these institutions' bond issues, or a combination of the three forms of support. In the post-WWII period, all national development banks are SOEs, mostly financed through retained profits, domestic taxation (particularly a portion of personal income taxes [PAYE]), but also through domestic government bonds, international capital market and concessional finance.

Sources of long-run financing: single and multiple

It is possible to identify two basic patterns of relation-based sources of late-development financing. The dominant pattern in most LDCs since World War II has been the 'single/limited long-run financing model'. This generally involves the reliance on one dominant national development bank such as BNDES in Brazil (for a discussion of BNDES and how it has worked, see Amsden, 2001; Musacchio and Lazzarini, 2014a, 2014b; Colby, 2012; Tavares de Araujo, 2013).

The second basic model, and one more likely to sustain the investment and innovative capacity of the economy, is a 'diversified/multiple financing model'. This approach would include national development banks, co-financing projects with state/regional development banks, bank-based conglomerates such as in South Korea and Taiwan, or Town and Village Enterprises (TVEs) such as in China (see Di John, 2014, forthcoming).

This second model has several advantages. First, it reduces the extent to which rent-seeking in search of long-run funds becomes a political game centred on one or a small number of state banks. Second, it introduces the prospects of joint financing between state banks and private business groups that can enhance the prospects of exchange of information and collaboration. Third, it increases the incentives for private business groups to monitor the quality of investments, to increase their technology learning efforts, and to become more innovative because they have a stake in long-gestating and complex ventures (see Di John, 2014, forthcoming)

Policy considerations

The effectiveness of a national development bank depends upon similar factors that make industrial policy effective more generally. It requires a clear set of 'carrots and sticks', and the ability to 'let go of losers' (Amsden, 2001). When successful, national development banks have been able to monitor projects and loans with *sectoral* experts, many of whom hold PhDs in a wide range of areas. The reliance only on financial experts is insufficient.

There are several other policy options to consider. First, NDBs do not necessarily need to finance all of the venture capital on projects. The experience of East Asian and other economies (such as France, Italy, Sweden, and in some instances, Brazil) suggests that policy-makers should consider diversified/multiple financing sources by getting endowment funds, donors, domestic banks and conglomerate groups and foreign firms to co-finance targeted project. As well, the state can maintain 'golden shares' in priority projects in order to maintain state control over strategic decisions, as has been practiced in Brazil (Mussachio and Lazzarini, 2014a).

Second, in order to ensure macroeconomic stability, NDBs should target sectors and projects that generate net foreign exchange earnings. This tactic is particularly relevant for growth strategies that rely on the increasing use of foreign savings to finance investment, such as in contemporary Ethiopia. When NBD financing does not take into account the importance of generating net foreign exchange, balance of payments crises tend follow. And this trend can in turn precipitate a growth collapse, even in countries where the NDB is sound in terms of technical capacity (e.g., Brazil, 1982-1994).

Third, the historical evidence suggests that national development banks have played a key role in the financing of infrastructure, agricultural research and development, and heavy industrial projects, particularly in the steel, chemical and mining sectors. Such financing has been oriented towards public enterprises, but also to large-scale domestic private conglomerates. The emphasis on financing domestic firms stems from the evidence that the most dynamic and innovative firms in LDCs are not generally subsidiaries of multinationals (Amsden, 2009).

A brief history of development banks in Ethiopia

The history of development banks in Ethiopia dates back to 1908 with the establishment of the Societé National d'Ethiope Pour le Development de Agriculture et du Commerce. However, the formal development of the financial market in general and development banking in particular did not commence in earnest until the 1950s.

The Development Bank of Ethiopia was established in 1951 with the help of funds from the World Bank. The period of the early 1960s witnessed the establishment of both private and government owned commercial banks and the establishment of the National Bank as a regulator for the sector. In addition, in 1962 and 1965 respectively, the government established two development oriented banks to serve as suppliers of mortgage lending (the Imperial Savings and Home Ownership Public Association and the Savings and Mortgage Corporation).

In 1969 the government established the Agriculture and Industrial Development Bank (AIDB), following the merger of the Development Bank of Ethiopia and the Ethiopian Investment Corporation (the latter an investment bank that was established in 1964). The newly established bank was meant to provide short-, medium- and long-term loans to the agricultural and industrial sectors.

During the period of 1976-1991, the AIDB continued its operation with a focus on providing credit to the agricultural and industrial sectors. However, almost all businesses in these sectors during this time were public enterprises that were characterized by massive inefficiency. This is especially true of the large state farms that were the recipients of a large share of the loans extended by the AIDB. The inefficiency and therefore inability of state farms to service their debt propelled the bank into insolvency by the end of the period.

After 1991 the financial market in Ethiopia underwent a phase of liberalization. Both development banks changed their names (the Housing and Saving Bank to Construction and Business Bank, and AIDB to Development Bank of Ethiopia (DBE)) and became more commercially-oriented, in the sense that they started to use profitability as a criterion for lending assessment. It of course remains the case that the loans that DBE provides are to sectors that are in line with the development priorities of the government.

The way forward

The discussions above have highlighted why commercial banks can fail to provide long-term finance that is required for investment in industries. The discussions have also shown that NDBs played a significant role in the catch up process of late developing countries by solving the problem of 'short termism' associated with commercial banks.

An examination of the historical experiences of Ethiopia suggests that this justification for the relevance of NDBs has been widely accepted by policy makers over the last century.

Therefore, our focus will not be on identifying the failures of commercial banks in supplying long-term finance to industries and how NDBs need to be established to solve this problem in Ethiopia. Rather, the research areas that will be fruitful, and therefore will interest us, will be issues such as the effectiveness of the Development Banks in Ethiopia in terms of providing long term financing, the modality of lending (single source vis-à-vis multiple financing) that they have adopted and the gains that could be achieved by following an alternative approach, the nature of the investments for which these banks have lent funds (e.g., are they foreign-exchange generating?), and other major challenges that they have currently face.

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