



HARVARD Kennedy School

ASH CENTER

for Democratic Governance
and Innovation

**RAJAWALI FOUNDATION
INSTITUTE FOR ASIA**

YANGON'S DEVELOPMENT CHALLENGES

Prepared for

Proximity Designs, Myanmar

March 2012

This research paper was written by José A. Gómez-Ibáñez (jose_gomez-ibanez@harvard.edu), Derek Bok Professor of Urban Planning and Public Policy at Harvard University's Graduate School of Design and John F. Kennedy School of Government, and by Nguyễn Xuân Thành (xuan_thanh_nguyen@hks.harvard.edu), Rajawali Senior Research Fellow, Ash Center for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University, following a trip to Myanmar January 9-15, 2012. Funding for this study was supplied by the Royal Norwegian Government. The authors would like to thank Proximity Designs for organizing a productive visit and Kyaw Ni Khim, the Director of Myanmar Egress Group, for his excellent counsel and generous assistance. They are also grateful to Philip Yeo and Lim Keo Chian of Singbridge International Investments and David Lim of JURONG International for visiting Myanmar and sharing their perspectives. The views expressed herein are the authors' own and do not necessarily reflect those of the Norwegian Government, Proximity, Myanmar Egress, Singbridge, Jurong International, the Government of the Union of Myanmar, or Harvard University.

Table of Contents

Overview	1
The Role of Yangon.....	1
The Importance of a Plan.....	3
Special Economic Zones and Port Facilities	6
Housing, Transportation and Other Infrastructure.....	9

Overview

Yangon is an attractive and relatively livable city that is on the brink of dramatic change. If the government of Myanmar continues its recent program of economic and political reform, the economy of the country is likely to take off, and much of the growth will be concentrated in Yangon, Myanmar's largest city and commercial capital. This paper argues that Yangon is poorly prepared to cope with the pressures of growth because it has only begun to develop a comprehensive land use and development plan for the city that would guide the location of key activities including export-oriented industries and port terminals. In addition, the city lacks the financial resources to finance the infrastructure and other public services required to serve the existing population, let alone support a population that is larger and better off. Failure to address these challenges will not only make Yangon a less livable city but will also reduce the rate of economic growth for the entire country. Myanmar needs a dynamic and vibrant Yangon to thrive.

The Role of Yangon

Yangon is Myanmar's largest city with a population of between 4 and 5 million, triple the size of the country's second largest city, Mandalay. Yangon has been Myanmar's commercial capital since colonial times and was its political capital until 2005, when the government moved the capital to Nay Pyi Taw, a new city built for that purpose in the center of the country, 335 kilometers north of Yangon.

Myanmar's economy has not grown as rapidly as the economies of its neighbors Thailand, China and India because of a combination of poor economic policies and economic sanctions applied by the United States and Europe. The current government has moved to relax state intervention in the economy and to promote political dialog, raising expectations that sanctions will be lifted and pent up potential for economic growth will be released.

If economic growth accelerates, much of the new activity is likely to be located in Myanmar's cities and particularly in Yangon. Economic development is almost always accompanied by urbanization as development both pushes workers out of rural areas and pulls them to the cities. The push comes because improvements in agricultural productivity—from the application of fertilizer, better pest control, irrigation, mechanization and other measures—reduce the amount of farm labor required. And

the pull comes because the cities offer economic opportunities in manufacturing and services that are more attractive than farm labor. The very concentration of activities in cities promotes productivity increases by making it easier for workers and firms to learn from one another. In addition, the larger market can support more specialized suppliers and services and make it easier for firms to find workers with the skills they need and for workers to find firms that value their skills.

Yangon is likely to capture a disproportionate share of Myanmar's development for several reasons. First, Yangon will remain Myanmar's commercial and financial capital despite the move of the national government offices to the new city of Nay Pyi Taw. When other countries established new capital cities, the financial industry remained behind. The creation of Canberra was not much of a challenge to the financial dominance of Sydney, for example, nor was Brasilia a challenge to Rio and Sao Paulo, Abuja to Lagos, Ankara to Istanbul or Islamabad to Karachi. Financial and commercial services gain more than any other sector of the economy from concentrating in one location, so that once a national financial and commercial city emerges it is extremely difficult to dislodge that city from its position of primacy.

Second, tourism is likely to grow dramatically and Yangon is the logical gateway for tourists to the country. Myanmar has many attractions that will make it an important tourist destination, such as the temples of Bagan. But the Shwedagon Pagoda in Yangon is the single most important tourist attraction in the country and on every tourist's must-see list. And since Yangon is Myanmar's largest city, its airport will offer the most convenient flights and connections for foreign visitors.

Finally, Yangon is the logical site for the export-oriented light manufacturing that is expected to develop with the economy's opening. Yangon's primacy in financial and commercial services and its port give it strong advantages over other Myanmar cities in attracting manufacturing. And Yangon's large population means that manufacturers and other employers will find it easier to recruit workforces with the skills they need.

Some Myanmar citizens and officials worry that it is undesirable for Yangon to capture so much of the country's economic growth. If peace is to come, development must be encouraged in the north and the border areas and not just in Yangon. And others fear that Yangon will lose much of its current charm and greenery and become just another polluted and congested Asian megacity.

It is politically important that economic opportunity improves throughout Myanmar, including its rural areas and smaller cities. Previous governments have reportedly

encouraged the development of secondary cities by locating universities, hospitals and other social infrastructure in them so that residents do not have to travel all the way to Yangon for specialized services. And such measures might be supplemented with programs to help farmers improve their productivity and thereby raise rural incomes.

But one also must be realistic about the enormous head start Yangon enjoys over Myanmar's other cities given its role as a financial center and port and the productivity advantages of its size. It would be at least difficult, and arguably also economically foolhardy, to slow Yangon's growth substantially. And this makes the task of preventing Yangon from becoming yet another poorly managed and unattractive Asian megacity more important.

The Importance of a Plan

Yangon is unprepared in many ways for rapid growth, but one of the most important shortcomings is that the city lacks a comprehensive land use and infrastructure plan that sets out where new development should be located and how it will be serviced. The government has formed a committee of relevant agencies to develop a plan including the Yangon City Development Committee (YCDC) and the national government's Department of Human Settlements and Housing Development (HSHD). The initial timetable for preparing the plan was unrealistic, however, given that the YCDC had no trained planning staff and thus little experience or expertise to draw from. Staff are being recruited and assistance sought from the UN Habitat and other foreign and international agencies.

Developing a plan is critical because it will help Yangon respond sensibly to the many unsolicited development proposals that it is bound to receive. Without a plan it will be much more difficult to decide which of these proposals, if any, advance important public interests in the development of the city and which advance only private interests at the expense of the public. And without a plan it will be very hard to resist the pressure to approve projects proposed by cronies or other politically well connected individuals and companies.

Indeed, with a plan in place Yangon could turn the intense interest in Myanmar into an asset rather than a liability by organizing competitions for proposals. If Yangon knew where it wanted to locate a special economic zone or expand its port, for example, it could issue a request for proposals (RFP) for potential managers of the zone or potential builders and operators of the port. The responses to the RFPs would help the

government to refine its plans and, through a competition of ideas, increase the chances that the zone or port will be well designed for Myanmar's needs and delivered at a reasonable cost.

A plan is also essential to protect and build on Yangon's considerable assets, including its historic buildings, concentrated in the downtown, and its many parks, lakes and other greenery. A hidden benefit of Myanmar's decades of slow growth is that many interesting buildings from the colonial era are still standing, including some impressive buildings that were left vacant after the government's move to Nay Pyi Taw. The government is considering a proposal to establish a special historic district that covers much of the downtown and would protect historic buildings from being demolished. While this is an important first step, many difficult choices will have to be made about which buildings are of sufficient interest to warrant protection. The large size and poor condition of many of the most important buildings will also complicate efforts to reuse them. Moreover, any policy toward the downtown will have to deal with the demand for modern offices and the downtown's relationship to the river. The downtown cannot be viewed primarily as an architectural museum if Yangon is to fulfill its role as Myanmar's most important office and business center. Modern office buildings and commercial centers will have to be built but in locations and of scales that do not conflict too much with the historic buildings.

Yangon's parks, lakes and other green spaces have also been protected in part by decades of slow economic growth. Hotels, restaurants and other buildings have encroached on Kandawgyi Lake, but the banks of the Inya Lake seem still largely underdeveloped and there appear to be some large tracts of land, such as the old university campus, that are so sparsely developed and centrally located that they have the potential to be important parks or public open spaces. All these sites will soon become targets for real estate development, and the government needs to decide which it should protect for the long term.

A plan will also be needed to encourage a more compact and sustainable development of Yangon. Some Yangon observers argue that the city needs to expand to develop—that there is no more room for growth within the already urbanized area. And this perception encourages dramatic proposals to develop major new residential areas to the south and east of the city, including one suggestion to build several bridges from the downtown to the southern bank of the Yangon River and develop that area, known as Dalat, both as a dormitory for downtown workers and a commercial center in its own right.

While major expansions of the urbanized area are likely to be needed in the long term, much of Yangon appears to be developed to a relatively low density, which suggests that there are many opportunities for infill development. If true, increasing density would help reduce trip lengths in Yangon and produce the denser traffic flows that are more easily serviced by public transport. Tracts of undeveloped land lie next to many of the stations on the circular railroad line, for example, and developing these parcels would encourage public transportation. Developers are likely to prefer building on the periphery rather than infill, however, because very large tracts of land can be assembled more easily and at lower cost. If Yangon is to encourage an increase in density, the plan will have to limit expansions on the periphery until they are really needed.

In this regard it is important that the plan apply to the entire metropolitan area and not just the territory of the YCDC. Many of the peripheral areas that are likely to become targets for development lie outside the YCDC in the Yangon Division. If the responsibility for planning and enforcement is fragmented between the YCDC and the Yangon Division then low density development on the periphery will be harder to control. Indeed it might be desirable to take this opportunity to expand the boundaries of the YCDC to include all of the urban extensions likely in the next several decades.

It will be difficult for Yangon to draft a basic concept plan on the timetable that real estate developers and others are likely to press for. Development proposals are likely to multiply in the next year or two if the current pace of reform continues. But the YCDC will be hard pressed to develop even a basic concept plan in a year, given that it lacks basic information about the current population and land uses (the last census was in 1983, almost thirty years ago) and only a handful of Myanmar citizens have training in planning. One can argue that the country already has waited for fifty years for development, and that it can afford to wait for a year or two more to get things right. The longer the delay, however, the greater the pressure to ignore the plan or to scrap the process of developing it will become.

Given the likely pressure for speed, it is important that Yangon receive high quality international assistance in its planning effort. One attractive possibility is to ask the government of Singapore to help Yangon prepare a plan. Singapore's Urban Redevelopment Authority (URA) has enormous credibility in the region and the world given the important role it played in building Singapore into a dynamic, livable and green city. The URA does not normally consult to other cities, but the Government of Singapore might want to make its services available on a government-to-government basis as a gesture of goodwill to Myanmar at this important stage of its development.

The Myanmar government has apparently asked, and Singapore has agreed, to provide help in training Yangon's planners. But a deeper involvement might be welcome where Singapore's planners not only train but assist Yangon in developing an initial plan.

Special Economic Zones and Port Facilities

Among the decisions that Yangon will be pressed to make soon are whether and where to create special economic zones in Yangon and where the port facilities that serve those zones will be located. Special economic zones are designed to attract foreign and domestic investors by providing relief from restrictive regulations or taxes to industries that locate within the zone. Relaxing regulations only within a zone gives a country a chance to gain experience before applying reforms on a larger scale. A common form of special economic zone is a free trade zone within which firms can import raw materials and other inputs and export finished goods without paying import or export duties. Yangon has had one free trade zone since the 1990s, although it has seen little activity. Any decision to continue to rely on this zone or to create new ones depends in part on the prospects for creating modern ports nearby to serve the zones. But the location of the zone or zones and the supporting port facilities will shape the metropolitan area in important ways.

Yangon is handicapped in that there is no deep water close to the city. Since colonial days the port has been located next to the downtown on the banks of the Yangon River. That port has a depth of only 8 or 9 meters even with dredging, however, and there are two sandbars between the mouth of the river and the downtown that ships with that draft can cross only at high tide. As a result, the port can accommodate only relatively small ships carrying up to 1,000 twenty-foot-equivalent (TEU) containers and it can take as many as two days for a ship to navigate from the sea up the river channel and across the sandbars to reach port. A half dozen different terminal operators have facilities at the port.

In the 1990s the government established new port facilities and a free trade zone at Thilawa on the eastern bank of the Yangon River some 30 kilometers southeast of the downtown. The Thilawa is closer to the sea, avoids one of the two sandbars and has a depth of 9 meters, better than the downtown port but still far less than the 16 or more meters required by the biggest container ships capable of carrying 10,000 TEUs. Hutchinson, a major international port operator based in Hong Kong, was given a concession to build and operate a container and general cargo terminal and a local company was given a concession to operate a palm oil terminal. Yangon has a number

of industrial zones to the west, northwest and northeast of the downtown, but Thilawa was the first, and is still the only, special economic zone in the metropolitan area.

The Thilawa project was the victim of exquisitely poor timing and changes in government policy. Hutchinson's terminal opened in 1998 just at the start of the Asian financial crisis, and the combination of the crisis and sanctions reduced both freight traffic and any interest by foreign investors in building facilities in the Thilawa free trade zone. In the years that followed the government changed its mind and began to grant terminal operators in the downtown port more space to expand their facilities instead of promoting Thilawa. The possibilities for terminals to compete on price or services are apparently limited since the tariffs that terminal operators can charge are regulated by government and a government committee assigns arriving ships to terminals. Hutchinson has kept its facility open but handles less than 100,000 of the roughly 350,000 containers that pass through Yangon's various port terminals each year, although Hutchinson claims it has the berth capacity to handle 1,000,000 containers per year.

Recently Asia World, a politically influential company that operates the largest container terminal in the downtown, advanced a proposal to build a new port on an island in the Yangon River roughly two-thirds of the way between Thilawa and the sea and approximately 80 kilometers south of downtown.¹ Asia World and its Chinese financial backers argue their port could, with regular dredging, accommodate ships with drafts of 12 to 14 meters. As part of the proposal Asia World would develop huge industrial parks and special economic zones on the east bank of the river on land that is currently rural and sparsely populated.

It is obvious that the downtown port should be gradually abandoned in favor of new facilities elsewhere. Not only is the draft shallow but there is little space behind the berths to expand, particularly for the sorting and storage yards that are so critical to a modern container terminal. Trucks travelling to and from the facilities add to downtown congestion despite a special truck access road that the government has built where space permits. The port is close to industrial zones on the west but not some of the newer zones to the east or the special economic zone at Thilawa. Finally, the port facilities cut the downtown off from the river. At many downtown locations the view toward the river is blocked by the truck access road and a wall of stacked containers.

¹ The 80-kilometer distance is a guess by the authors. There was no scale on the map we were shown.

While more serious study is needed, there are several reasons why the expansion of the existing zone and port at Thilawa is much more attractive and realistic than Asia World's proposal. In the first place, it is unclear that the port depths that Asia World is promising are actually feasible, and there are concerns that dredging and the expansion of the island will change the river flow to cause more silting upstream.

In addition, the largest container ships are unlikely to call at Yangon for many years to come, which would make the enormous investment in channel deepening wasteful. Yangon lies off the trade lanes, so it will be a long time before Myanmar's imports and exports reach the volumes necessary to support direct calls from one of the huge globe-trotting containerships. For example, Thailand and Vietnam's new deepwater ports began to receive direct calls from ships bound to Europe and North America only after their hinterlands were generating 5 to 6 million TEUs per year, 15 to 18 times Yangon's current volume. And the efficiency of the hub and spoke system is such that most containers in Thailand, Vietnam and India are still transported by feeder ship to transshipment points such as Singapore or Malaysia before being loaded on mother ships to final markets.

Finally, the territory that Asia World wants to reserve for its industrial and special economic zones also seems excessively large and remote. Thilawa's special economic zone currently covers 3,000 acres and is apparently almost entirely vacant. And there are probably opportunities to expand the size of the Thilawa economic zone by condemning nearby underdeveloped industrial areas or by creating a new zone within reasonable driving distance of the existing port, possibly to the northeast. Locating the economic and industrial zones far from Yangon, as Asia World proposes, will make it harder to take advantage of the city's large labor pool and specialized business services.

If a significantly deeper port is technically possible at the site that Asia World proposes, it might make sense to protect that site for development in the long term. Building Asia World's port now, however, is unnecessary and very financially risky. In the medium term Thilawa is much closer to Yangon, has substantial existing port facilities already and space for expansion, and its depth will be adequate for the size of the containerships that are likely to call.

As a companion report explains², it will be critical that the special economic zones and ports be managed to international standards, no matter where in the metropolitan area they are located. From a regional planning perspective, this will require close cooperation between YCDC and the Yangon Division because both Thilawa and the site of Asia World's proposed port lie outside YCDC in the Yangon Division. Thilawa is dependent on YCDC, for example, in that the city controls at least one of the two bridges that connect Yangon with Thilawa. And YCDC may consider the development of special economic zones in Thilawa or further south competitive with developments in its own territory. The two governments need to work together to identify and resolve potential conflicts.

Housing, Transportation and Other Infrastructure

If Yangon is to be an important engine of Myanmar's economic growth, then the metropolitan area plan must provide housing and infrastructure to accommodate a population that is both larger and better off. Housing will be particularly important, especially since 10 percent of the population of Yangon is thought to live in slums already. The national government's Department of Human Settlement and Housing Development had a program under which real estate developers who wanted to build apartments had to promise to set aside a certain portion of the units for sale to low income households. This program has ended for some reason, but probably was not large enough anyway to affect housing affordability in the metropolitan area overall. An investigation of housing costs in the metropolitan area and the opportunities for reducing them without relying on unrealistically large government subsidies would be extremely useful.

By all accounts the city also already suffers from a serious backlog of infrastructure needs. Only 60 percent of households reportedly have piped water connections and there is no central sewage collection or treatment system. Electricity supplies are inadequate and blackouts are common.

A major problem is that the YCDC's financial resources are inadequate to cope with its infrastructure responsibilities. The YCDC provides water, sewage, drainage, street lighting and some of the transportation infrastructure in the city. It apparently relies primarily on revenues from license fees collected from businesses and households;

² "Appraising the Post-Sanctions Prospects for Myanmar's Economy: Choosing the Right Path," report prepared for Proximity Designs, Myanmar, January 20, 2012 available at <http://www.ash.harvard.edu/Home/Programs/Institute-for-Asia/Publications/Occasional-Papers>.

these fees are apparently based on the size of the business or housing unit and thus function much like a property tax. But the tax rates must be low because the YCDC's annual budget for infrastructure is reportedly only 55 billion kyat, or about 10,000 kyat (US\$ 12) per person. Clearly the taxes, user charges and other financial resources available to the city must be increased considerably if the infrastructure backlog is to be addressed.

Transportation is of particular concern, and there is much discussion of flyovers and other improvements to the road network. Although the pavement is in poor condition on some roads, Yangon's road system does not appear to be as highly congested as many other Asian metropolitan areas with similar populations. If Yangon has been spared extreme traffic congestion so far it is only because automobile ownership is still out of reach for all but the wealthiest few households and the government has banned motorcycles within the metropolitan area, reportedly for safety reasons. The city's circular railroad line, which is operated by the national railroad company, is thought to carry 15 percent of all urban trips despite its slow speeds and infrequent service. But the backbone of Yangon's transportation system is the buses, which must carry close to 80 percent of all motorized passenger trips. The city is served by 8,500 buses, some 600 operated by two government-owned companies and the balance by private individuals who own one or two buses and band together with other private bus owners in route associations. The buses appear to be extremely overcrowded probably because the fares, which vary from 50 to 200 kyat (6 to 25 US cents) depending on distance travelled, are inadequate to support the renewal of the fleet and the government cannot afford to subsidize bus services.

Yangon must either improve its circular railroad and its bus system or allow motorcycles. If the bus system is not improved, the pressure to allow motorcycles is likely to become unbearable. And if motorcycles are permitted without improving the buses, bus ridership will collapse and Yangon will join the growing list of Southeast Asian cities that are overrun by motorcycles. The Yangon Division agency that regulates bus fares and routes estimates that fares would have to double to make bus service profitable enough to renew and expand the fleet. Fares would not have to increase as much if the national and local governments waived the various import duties and business taxes that apply to bus buyers and operators. The YCDC also should seriously investigate exclusive bus lanes or a bus rapid transit system to both improve the quality of service and reduce operating costs by increasing the productivity of buses and their

crews. At the very least any new flyovers should be designed to give buses priority through bottlenecks.

In sum, Yangon and Myanmar appear to be on the verge of explosive growth, making up for decades of stagnation or decline. Yangon is almost certain to become a key engine in the nation's economic growth as Myanmar's largest city, commercial capital, most important port and tourist destination, and most logical site for export-oriented manufacturing. But how well Yangon fulfills these roles depends on how well the city is managed. Yangon's slow growth in the past had a hidden benefit in that it preserved many assets—greenery, parks and open spaces and historic buildings—that other Asian cities lost. As a result, Yangon has an opportunity to avoid becoming another sprawling, polluted and highly congested Asian megacity and grow instead into a greener and more livable metropolis. But it will do so only if it prepares a plan before development threatens to overwhelm it. And the plan will succeed only if it is based on thoughtful and realistic analyses of issues like the location of special economic zones and ports and the provision of affordable housing and quality infrastructure.