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Land Use in Dubai

BEAU SHAW

Introduction

The UAE is 83,600 square kilometers in size, which makes it slightly smaller than Maine.¹ The CIA provides a very adequate description of the landscape: “flat, barren coastal plain merging into rolling sand dunes of vast desert.” The country’s only natural resources are listed as petroleum and natural gas.² Despite this geography, the UAE contains some 9,445,624 people. Of these nearly ten-million people 80% are non-citizens. Roughly a quarter of these immigrants are Persian, or Arabian immigrants from another country, half are South Asian, and 8% are from other parts of the world.³ More surprising than the fact that millions of people have chosen to make an arid desert home, is that the population was only 70,000 in 1950.⁴ The massive economic and population growth of the UAE, as well as all of its neighboring states, can be attributed to the discovery of oil in the late 1950s.⁵

Without the benefit of well-established urban fabric or architecture, the UAE is an interesting place to examine the built environment. It is a country that has attempted to embrace modernity, and this is well reflected in its glass and steel architecture. This paper will explore the built environment of the country’s largest city, Dubai, by examining land-use and policy. Several possible land-use policies will be examined and arguments for possible land-use regulations made.

¹ CIA World Factbook, United Arab Emirates, U.S. Central Intelligence Agency, Jan 7, 2016, at <https://www.cia.gov/library/publications/the-world-factbook/geos/ae.html>.

² *Id.*

³ *Id.*

⁴ United Nations Department of Economic and Social Affairs, 2015, at: <http://esa.un.org/unpd/wpp/DataQuery/>.

⁵ BBC, U.A.E. Country Profile, Nov 18, 2015, at: <http://www.bbc.com/news/world-middle-east-14703998>.

Dubai's (Lack of) Land-Use Regulations

DLA Piper is one of the world's leading land-use, zoning, and eminent domain law firms. The firm produces hundreds of pages of information on land-use laws in many international jurisdictions. The firm's material on Dubai states that the Emirate has "no published legislation or guidelines in English or Arabic in relation to the process and procedures of obtaining planning and zoning permission" as of January 2016.⁶ The firm states that land-use regulation in the Emirate is based on practice and custom. Land-use is loosely controlled by Dubai Municipality, which states what an explicit use of a single plot of land can be. There are no means of formal appeal of any authority's decision at any time regarding land-use decisions.⁷ In a very notable difference from the U.S., there are no formal means for third parties to object or consult in any land-use decisions in Dubai.⁸ One of the only explicit land-use regulations uncovered while researching this paper was that the U.A.E. prohibits church bell towers and the public display of crosses.⁹ Although there are likely more land-use regulations in effect in Dubai, these regulations are not publically available or referenced in English. As such, it is not possible to cite to specific laws governing land use or urban policy in Dubai. However, it is possible to examine current construction and development, as well as the entities actively building in Dubai, to uncover non-public land use policy.

⁶ Olaf Schmidt and Jay Epstein, "RealWorld Law, U.A.E. – Dubai," DLA Piper, January 2016, at 23.

⁷ *Id.* at 27.

⁸ *Id.* at 26.

⁹ U.S. State Department, U.A.E. International Religious Freedom Report 2007, <http://www.state.gov/j/drl/rls/irf/2007/90223.htm>.

A City Without Zoning?

A city does not need zoning to be culturally or economically vibrant. Houston, Texas is a frequently cited example of a highly-functional major metropolitan area without a zoning ordinance. It is true that Houston does not have a zoning ordinance or code, but the city does have a development code governing subdivision building that reads much like a zoning code. Sec. 33-128. – “Landscape buffer required” of the Houston Code of Ordinances requires that property owners install a landscape buffer if a developed property contains non-commercial uses or multifamily housing located next to a single-family home.¹⁰ A section on variance requests will convince a code reader that some land-use scheme is operating in Houston. Most tellingly, Houston applies different land use regulations to areas the code describes as “suburban” and “urban.”¹¹

One of the most interesting and unique aspects of Houston’s land-use scheme is the use of deed restrictions created by property owners. Property owners have the right to create deed restrictions, and the owner of the restricted property has the right to sue for their enforcement.¹² Unlike zoning, deed restrictions are a free-market means of controlling land use because they rely on contracts between individuals. A buyer knows what, if any, deed restrictions apply to a property he might purchase. However, both Houston and Texas recognized a significant disadvantage to a land-use regime governed only by restrictive covenants: that enforcement of these covenants requires individual property owners to sue other property owners to enforce the restrictions.¹³ The city encouraged the state to enact legislation that would allow the city to bear

¹⁰ City of Houston, Code of Ordinances, Sec. 33-128.

¹¹ Prof. Matthew Festa, *In the Unzoned City*, 17 Spring 2012.

¹² Teddy M. Kapur, *Land Use Regulation in Houston Contradicts the City’s Free Market Reputation*, 34 Environmental Law Institute 10045, 10049 (2004).

¹³ *Id.* at 10050.

the financial costs of suing to enforce covenants, if the city could get three plaintiffs to sign onto the suit.¹⁴ This has largely reduced deed restriction enforcement problems by shifting costs to the city, as would be the case in a traditional zoning system. The city will also issue or decline building permits based on restrictive covenants, which further shifts enforcement costs away from individual landowners.

Although development controls and deed restrictions work together to control and govern land use in Houston, there are fewer restrictions on property owner's use of land than in zoned cities. Although development controls and building permit requirements allow the city limited control of land use in all areas, they only cover development construction and areas with deed restrictions. Roughly 75% of Houston has no deed restrictions, and thus landowners in most of the city are not affected by the deed-restriction regime.¹⁵

Even in areas of the city with deed restrictions, deed restrictions operate on the neighborhood level, with individual neighborhoods adding, removing, or amending restrictions based on either a majority or supermajority.¹⁶ These smaller political units likely increase landowner control by giving landowners more political power in land-use governance, although a neighborhood could theoretically enact deed restrictions far more restrictive than any zoning regime without an individual landowner's consent. However, it appears that landowners can elect to opt out of restrictive covenants in some cases.¹⁷

Although maximizing property rights may itself be a worthy end in the eyes of many, Houston's limited land-use regime allows for significant innovation. Zoning is often responsible

¹⁴ *Id.*

¹⁵ "Probably no more than twenty-five percent of the land area of Houston is subject to restrictive covenants." Bernard H. Siegan, *Non-Zoning in Houston*, 13 J.L. & Econ. 71, 74 (1970).

¹⁶ Kapur, at 10051

¹⁷ *Id.* at 10052.

for inhibiting innovative neighborhood design.¹⁸ A Congress on New Urbanism report notes that New Urban communities tend to cluster in geographic areas, particularly Florida and Colorado, but noticeably in Texas also.¹⁹ In the case of Houston, New Urban developers are less constrained, and the city is home to many New Urban style developments.

Should Dubai Be like Houston?

Both Dubai and Houston share an economy heavily reliant on oil, although Dubai existentially so. Could Dubai use a system of restrictive covenants to regulate land use? Dubai, as well as the rest of the U.A.E. uses a civil law system. As an absolute monarchy, the autocratic ruler could simply decree that restrictive covenants will be used to regulate land use. Due to how land and housing is allocated in Dubai, the emirate might be a very easy place to install and enforce deed restrictions.

Many, if not most, landowners in Dubai have received their land from the government. The scale of land distribution is incredible: in the neighboring, less-developed Emirate of Ras al-Khaimah the government distributed over 53,500 plots of land between 1976 and 1996.²⁰ The government of Dubai provides funds and fully serviced land to citizens.²¹ Today, the Mohammed Bin Rashid Housing Foundation, which is a government entity, donates government housing, land, and funds for construction to citizens.²² These housing and land grants already include

¹⁸ Festa, *supra* at note 11.

¹⁹ The Congress for the New Urbanism, “The Coming Demand,” at: http://webcache.googleusercontent.com/search?q=cache:M-h5l36p_gIJ:www.cityofmillvalley.org/Modules/ShowDocument.aspx%3Fdocumentid%3D8161+%&cd=5&hl=en&ct=clnk&gl=us

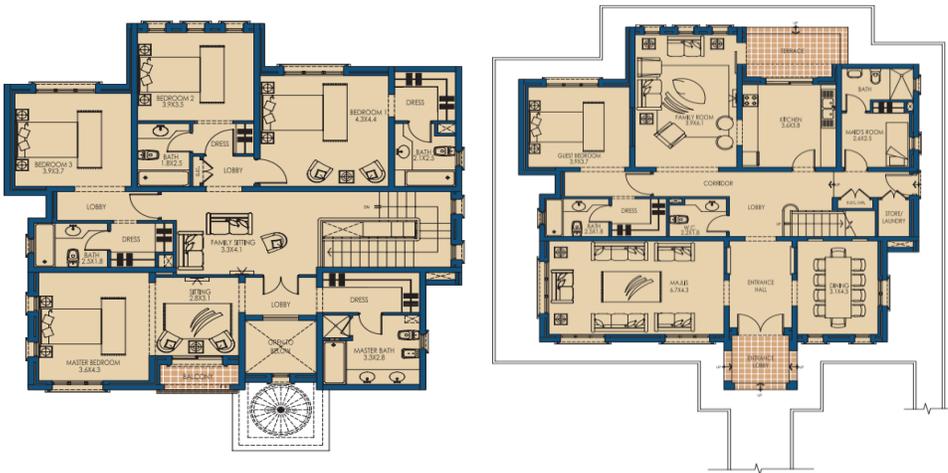
²⁰ Mohammed Al-Mansoori, *Government Low-Cost Housing Provision in the United Arab Emirates. The Example of the Federal Government Low-Cost Housing Program*, University of Newcastle upon Tyne, Nov. 1997, at 61.

²¹ *Id.* at 71.

²² Government of Dubai, Mohammed Bin Rashid Housing Foundation, “About Grants,” at: <https://new.mrhe.gov.ae/en/eServices/HousingServices/Grants/Pages/default.aspx>.

restrictive covenants: the land cannot be “sold or leased or gifted or donated or any other mean of deed transfer [sic].”²³ The government could begin including restrictive covenants to create a land-use regime. The U.A.E. has an extremely high birth-rate (approximately 15.43 births/1,000 population), so the government could begin adding restrictions on the deeds of new grantees and effectively cover much of the Emirate in a few decades (as presumably property cannot be deeded to children in an inheritance given the above restriction).²⁴ If some deeds do not include restrictions, this system would more strongly resemble Houston’s. The government could also compel previous grantees to add deed restrictions to increase land-use control.

There are landowners in Dubai who did not receive their housing through a modern government program, so under the above-proposed system these landowners might not have deed restrictions, but that does not defeat the overall system. Of course, the government could



simply compel those landowners to add deed restrictions.

Floor plan for a contemporary government provided house. The house is two stories and 4,462 sq. ft. Notice the included “maid’s room” on the right side of the first floor.¹

Despite the potential ease of using restrictive covenants to control land use in Dubai, such a system would not serve the Emirate well. Dubai is growing and changing rapidly. In 2010, the government of Dubai predicted that the population would grow from the then population of 1.9

²³ Government of Dubai, Mohammed Bin Rashid Housing Foundation, “Residential Land Grant,” see also, <https://theses.ncl.ac.uk/dspace/bitstream/10443/438/1/Al-mansoori97.pdf>

²⁴ Central Intelligence Agency, World Fact Book, *United Arab Emirates*, Apr. 27, 2016, at: <https://www.cia.gov/library/publications/the-world-factbook/geos/ae.html>.

million people to between 2.3 and 3.4 million in 2020.²⁵ The population as of 2016 was 2.5 million, and thus will likely exceed even the high projection by 2020. Thus, land-use must remain flexible if Dubai is to continue to grow efficiently. If the government were to begin issuing deeds with restrictive covenants or requiring deed holders to add them, the plots of land would have limited uses, and in a city that is rapidly changing, this would be a significant barrier to urban growth and change. If Dubai had adopted a system of restrictive covenants in 1980, when the population was only 276,000 the city would be heavily constrained today. Not only is the population ten times larger, but the urban core has extended significantly since then, and has absorbed many suburban and rural areas.²⁶ Restrictive covenants are too rigid a system, even if modifications were possible, to be used in an ultra-dense, fast growing urban area. Although Houston has a massive population, that population is heavily spread out, in Dubai, the population is concentrated in skyscrapers and very dense low-rise areas around the urban core. If these areas around the urban core were controlled by restrictive covenants, the dense-urban area would be prevented from growing outward.

Does Dubai Need Zoning?

This paper has proposed and rejected a Houstonian system of deed restrictions to control land use in Dubai. But perhaps Dubai does not need any land-use regime. Although Dubai is an Emirate within the U.A.E, which is nominally a federation of monarchies, the ruler has de-facto absolute power within Dubai.²⁷ A political commentator at *The Economist* has observed that “the

²⁵ Roxy Binno, “Dubai 2020 Urban Masterplan,” Feb 2012, at 8, at:

http://isocarp.org/app/uploads/2014/05/AfE_2012_-_Dubai_Municipality-Planning_Department.pdf.

²⁶ Government of Dubai, Dubai Statistics Center, “Total Population at Census by Gender,” Feb. 2000, at: <https://www.dsc.gov.ae/Report/-482155519CSFB00-03-01.pdf>.

²⁷ Al-Mansoori, at 50.

political structure of the federation remains embedded in a tribal past with the ruling shaikh [sic] as the sole decision maker and his decisions are seldom openly disputed.”²⁸ It might be more fair to say that the rulers decisions are never openly questioned, and if they are, criticism ends quickly. According to Freedom House, a well-regarded human rights group based in the US, the U.A.E. is one of the most speech restricted places in the world. There is censorship of foreign and domestic publications, and it is illegal under criminal and civil law to criticize “the government, rulers and ruling families.” UAE Federal Law No. 15 of 1980 bans the publication of any information that “causes damage to the national economy.”²⁹

Suffice to say that the ruler of Dubai exercises largely complete and unquestionable control over his emirate. This control extends to land-use. Although there is little publically available information on the topic, a quick look at a satellite map of Dubai reveals large swaths of land with few or no residents, with an occasional palace or equestrian facility.³⁰ These areas are likely owned, and are certainly controlled by, the royal family.

However, the ruler of Dubai’s control of the land and built environment extends further than complete legislative and executive control and significant land ownership. The U.A.E. treats real property and real estate development rights as gifts for allies and friends of the ruling families. Rulers in the U.A.E. dispense property and development rights to individuals favored by the ruling family.³¹ The result of this system of patronage is that, not only are landowners in Dubai under a legal obligation to obey the ruling family without open dissent, but that the ruler

²⁸ Sarah Searight, “The United Arab Emirates through the 1990s: fitful recovery ahead,” The Economist Intelligence Unit, 1990.

²⁹ Freedom House, “United Arab Emirates,” 2014, at: <https://freedomhouse.org/report/freedom-press/2014/united-arab-emirates>.

³⁰ Government of Dubai, Dubai Statistics Center, “Population Map 2015,” 2015, at: <https://www.dsc.gov.ae/en-us/EServices/Pages/Population.aspx>.

³¹ Meeting with the U.A.E. Planning Council, Dec 27, 2015.

can make significant personal demands or requests of most of the major landowners in Dubai to whom he grants land or development rights. The ruler could, legally or by request, ask property grantees to build only certain structures or build within certain limitations. Thus, the ruler can exercise land use control through direct personal relationships.

The government of Dubai is very consciously focused on providing comprehensive and quality information to the public, and it is a testament to their success that one can access a government website listing every developer operating in Dubai. The Land Department lists 1,118 registered developers.³² Most of these are single-purpose entities focused on one building or apartment. Some are building a few structures on one plot of land. Few of the firms have functional websites.

The relatively limited presence of these roughly thousand developers is not surprising. Most of the land development in Dubai is performed by massive companies who build exclusively megaprojects. The most well-known of these firms are TECOM (Jumeirah Group, Dubai Properties Group, TECOM Group), Emaar Properties, and Nakheel Properties. Nakheel is owned by the government of Dubai, TECOM is majority owned by the ruler of Dubai personally. Emaar Properties is owned by a previous member of the government and a close friend of Dubai's ruler. These large developers are all intimately connected to the government and are able to use that relationship to reap great profits and access massive amounts of capital through state funds. Land development is thus relatively tightly controlled by the ruling family. The ruler has direct ownership of two of the largest developers in Dubai, and the third mega developer is controlled by a political client.

³² Government of Dubai Land Department, "Approved Real Estate Developers," at <http://www.dubailand.gov.ae/English/Pages/Approved-Developers.aspx>.

Land-use regimes and laws seek to create harmonious relationships between land users and the larger community. *Village of Euclid v. Ambler Realty Co.* affirmed the legality of zoning regulation in the U.S. In that case, the U.S. Supreme Court claimed that land-use laws can “increase the safety and security of home life, prevent street accidents” and decrease the intensity of “nervous disorders.”³³ The court lists dozens of other ways in which governmental restrictions on the use of land can benefit nearby landowners and the community at large. Although there is still intense skepticism in regards to the benefits and values of the American system of zoning, the system is generally thought to provide landowners with reciprocal benefits. Thus, arguably, the government deprives a landowner of some of the uses of his property for the benefit of others, and that landowner is similarly benefited by the government’s prohibiting others from engaging in uses that would disturb him.

Dubai is unlike the U.S. in the autocracy’s heavily centralized control of land. The ruler owns significant amounts of land, is the source of most of the land for the Emirate’s citizens, and controls the developers of the land. Thus, a system regulating land use would be both written and enforced by the ruler, but would apply almost exclusively to his own activities. The centralized control of development and land use explains why there are virtually no publically available land-use regulations in Dubai: because they are not immediately necessary. The ruler is ultimately responsible for deciding how land will be used in Dubai. This is in sharp contrast to the U.S., where the vast majority of decisions about how to use land are made by private individuals. Land-use regulations in the U.S. inform landowners of how they may use their land, but in the U.A.E., the ruler decides how land may be used, and he is the primary land developer -

³³ *Vill. of Euclid, Ohio v. Ambler Realty Co.*, 272 U.S. 365, 394 (1926).

nothing occurs without his consent. Thus, Dubai's ruler does not need land-use regulations to control land use in the Emirate.

Non-Traditional Objectives of a Land-Use Regime

If Dubai does not need a land-use regime to control how land is used, does it follow that Dubai should not have a land-use regime? Although counter-intuitive, Dubai should still adopt land-use regulations. The primary reason to adopt explicit regulations is to create long-lasting land and real estate value. Dubai will not be able to rely on oil to buoy the economy and lifestyle of citizens forever. It is unlikely that the government can be the sole developer of land in Dubai once the mega developers are no longer subsidized by low or no cost-capital. If Dubai is to remain a world-class city with an associated global economy, it must have a functional real estate sector.

Real estate can be the source of immense value to an economy, accounting for billions of dollars of value and acting as an investment vehicle for domestic and foreign capital. Without a free and transparent market, especially when it is difficult to determine what could be built in the future, investment in real property is difficult. One of the first calculations any real estate developer or investor makes is how the replacement cost of a building compares to its price. If the replacement cost is less than the market price, then the prudent investor will simply build a new building rather than buy an existing one.³⁴ This oversimplified calculation works in reverse. If potential builders and investors are unable to determine the feasibility of replicating a potential investment due to a non-public and political real estate sector, then the potential investor will

³⁴ William Poorvu and Jeffrey Cruikshank, The Real Estate Game, Free Press, 1999.

likely avoid investing because he cannot determine if and how new investments could be made. This must certainly be the case in the U.A.E. Most development is done by firms closely intertwined with the government.

If Dubai eventually wishes to attract foreign developers, it must enable those developers to plan for the future. Dubai could theoretically adopt a system where there is no land-use regulation, and developers could plan accordingly. Alternatively, Dubai could adopt a transparent land-use regime that developers could use to determine whether an investment is a good one. The system need not be absolutely transparent. The American system strives for transparency, hence the sometimes stringent application of the Open Meetings Act to conversations between developers and members of zoning boards.³⁵ The American system is successful in making zoning codes publically accessible, even relatively small towns often provide their zoning codes online. However, the U.S. land-use system has some serious transparency problems, especially in certain cities. In Chicago, a donation of a few thousand dollars to an alderman can purchase a significant zoning change.³⁶ Although the Chicago zoning code and map are publically available, they can be changed by political insiders. This has costs for both previous investors and new developers. However, Dubai's current land-use opacity makes the Chicago system, where at least donations can be tracked, appear extremely transparent.

Dubai's purely insider land-use system, which is in fact so restricted that only citizens of Gulf Cooperation Council states can even own and develop real estate in most of Dubai, cannot

³⁵ 5 Illinois Compiled Statute 120 - Open Meetings Act (Jan. 1, 1995)

³⁶ A developer's \$800 donation to an alderman allegedly resulted in a zoning change from single family homes and duplexes to allow a small condo tower. Dan Mihalopoulos, Robert Becker and Darnell Little, "How cash, clout transform Chicago neighborhoods," Chicago Tribune, Jan. 27, 2008.

outcompete a system where meeting public demand determines a land user's success. Market economies have always outperformed planned economies, and Dubai's land and development opportunities do not trade in an open market.

Efficient land and real estate markets that generate significant economic returns are not the only benefits of a transparent land-use regime. If the value of property ownership is uncertain due to artificially constrained markets, as in the U.A.E., this may deter real estate investment by both high-net-worth individuals and large corporations who may want to build or hold a building from which to operate from. Prudential's real estate investment wing predicts that the value of commercial real estate in the U.A.E. will only increase by a factor of 2.7 by 2031.³⁷ This compares to an increase in value of 13.4x in developing Asia and in 3.8x in Latin America by the same date. The GCC's increase in value is closer to that of far more developed markets such as the U.S. and Canada (2.4x) and Western Europe (1.7x). It does not compare well with other developing markets. The GCC's growth projection is even less impressive considering the huge amounts of undeveloped land in the GCC and the construction boom occurring there. Perhaps this analysis of modest growth incorporates investor concern about the stability of the real estate market in the GCC and the relatively low level of value added by developers in a non-competitive market.

If Dubai is to have a healthy and significant real estate industry post-oil, it must provide potential investors with information about how the market will (or will not) be controlled in Dubai. Otherwise, the U.A.E. will have to continue to rely on, and fund, only politically

³⁷ US Research, "A Bird's Eye View of Global Real Estate Markets: 2012 Update," Prudential, Feb. 2012, at: http://research.prudential.com/documents/rp/Birds_Eye_View_2012_PRU.pdf.

connected developers. Although this is a possible strategy, it will heavily limit the number and quality of market participants making real estate investments.

Hints of a Land-Use Regime

Although there is little information about Dubai's land-use regulations and policies, there is some publically available information that gives clues as to how the government of Dubai regulates land use.

Dubai's 2020 Urban Masterplan

Perhaps the best place to look for Dubai's urban vision is Dubai's 2020 Urban Masterplan, which was created in order to explain how Dubai plans to develop between 2010 and 2020.³⁸ Only an overview of the plan could be found at the time of this paper's publication, but it includes some interesting statements. For instance, Dubai will try to keep the percentage of Emiratis in Dubai constant at 9.1%.

The plan envisions three scenarios, "suburban expansion," "satellite settlements" that seem to be dense areas throughout the emirate, and "compact city," which involves high-density construction in the already developed urban area along the coast. Although the plan does not provide details about how these three scenarios would be accomplished, or what they would actually look like, inference is fairly easy. Suburban expansion will involve an outward development of low-rise, detached structures. Satellite settlements will likely resemble towns,

³⁸ Roxy Binno, "Dubai 2020 Urban Masterplan," Feb. 2012, at http://isocarp.org/app/uploads/2014/05/AfE_2012_-_Dubai_Municipality-_Planning_Department.pdf.

with low-density suburban areas encircling several higher-density cores. Compact city envisions high-density development in a tight area. The plan is almost Euclidean in its division of spaces, particularly in its deliberate separation of tourists from locals. One map divides Dubai into four areas, with over half the land area set aside for “conservation, resorts, gas extraction, agricultural, equestrian and camel traditional sport.” There isn’t much land to be left in its natural state.

Mega developers feature very prominently in the plan. The plan states that mega projects will continue to be the primary means of development. The plan notes that these massive projects will be used to meet housing and commercial space goals. The plan uses a graphic to show that mega developers will work on equal footing with Dubai Municipality and other government organizations in determining the Emirate’s future built environment. However, this private control should not raise any alarm bells, because the government and developers are one in the same.

The plan does not have any legal significance. It is simply a proposal, and it contemplates the creation of a land-use and zoning agency called the Supreme Planning Council, which would be under the control of the “Executive Council” which is in turn controlled solely by the ruler of Dubai. The master plan contemplates the adoption of its “basic strategic directions and objectives.”³⁹ The plan was adopted in this way by Dubai’s Executive Council, although it doesn’t seem to be a commitment to anything in particular, as the master plan includes little prescription. Most importantly, the plan contemplates the establishment of a Supreme Urban Planning Council that will develop a comprehensive urban planning system. It appears that this

³⁹ Dubai Municipality, “Dubai 2020 Urban Masterplan Forward,” Feb 2012, at <https://www.dm.gov.ae/wps/wcm/connect/52ee5cab-66bb-463f-afbd-8ca3c46cc0c1/Dubai+2020-+brochure%2C+A4-+english+24.4.2012.pdf?MOD=AJPERES>.

council never became functional. An article from May 2011 mentions that this council will soon be established and will legislate on land use.⁴⁰ An article published in March of 2013 mentions the Council's recent creation.⁴¹ The Council is not mentioned in DLA Piper's analysis of zoning and land use in Dubai. There is no evidence available online showing the existence of the Council. Given Dubai's excellent web services and the importance that this agency would have to Dubai, it is likely that the Supreme Urban Planning Council has not yet been established.

Unfortunately, as is evidenced by the above, not much can be learned from this Masterplan. However, most helpfully, the plan makes clear that whatever is built, will be built by mega developers. It appears that Dubai is open to either low-density or high-density development. There is not any focus on public space, and there is no mention of transportation beyond saying that the plan "implicat[es]... transportation." The lack of any definite plan other than continuing to rely on mega developers for urban development likely indicates that Dubai does not plan to alter course. This means that public transportation will remain limited, public space will remain almost non-existent, and the city will continue its sprawling low-density expansion.

Singapore's 2014 Master Plan

In contrast to Dubai's masterplan, Singapore's masterplan's summary lays out several concrete objectives.⁴² First, the plan states that there will be economic and high-tech

⁴⁰ Andy Sambidge, "Dubai sets up new committee to control urban planning," *Arabian Business*, at <http://www.arabianbusiness.com/dubai-sets-up-new-committee-control-urban-planning-400612.html>.

⁴¹ Simona Foltyn, "Dubai must give expats a role in city development," *Gulf News*, at <http://gulfnews.com/opinion/thinkers/dubai-must-give-expats-a-role-in-city-development-1.1165051>.

⁴² Singapore Urban Redevelopment Authority, "Master Plan 2014," 2014, at: <https://www.ura.gov.sg/uol/master-plan/view-master-plan/master-plan-2014/master-plan/Introduction.aspx>

manufacturing clustered in several areas throughout Singapore. The plan also states that urban development will occur in such a way that 90% of residents will live within 400 meters walking distance of a park. This is an incredible feat, and the excluded residents may reside in the stately single family homes occupying quiet pockets of the island. The plan also states that by 2030 there will be 360km of rail, so that 80% of all homes will be within a 10-minute walk of a public rail station. The plan frequently emphasizes the importance of public space, and the government's continued focus on public space creation and maintenance.

Although both the Dubai and Singapore master plans are glossy and likely aspirational, the Dubai plan lays out no concrete objectives, and does not seem to deviate from current practices in any way. In contrast, the Singapore plan at least presents the sectors (transportation, public space, and commercial centers) that the government will focus on.

Land-Use Regulation Possibilities

Examination of Dubai so far has been fairly abstract. Compared to Singapore's master plan Dubai's lack any firm commitments, focuses, or objectives. The only substantive land use policies uncovered are that the ruler of Dubai uses land grants and development rights as political favors to allies and that government-controlled mega developers are, and will continue to be, responsible for most of Dubai's development. If Dubai were to create a system of land use controls, what would they look like? As discussed earlier, deed restrictions are probably too rigid and limited in scope to design a city-state. Dubai would not have to commit to any one system of land use. Legally and politically, it would be unnecessary to adopt American style zoning.

However, there are definite areas where Dubai could make changes that would improve land values and better position the Emirate for future growth and economic relevance.

Street Design

One of the primary ways in which Dubai can benefit from an explicit land-use regime is ensuring harmonious and consistent planning. One area where poor planning by mega developers is obvious is street design. Reviewing a satellite map of one of the newest and most desirable areas of Dubai reveals heavily segmented, unconnected subdivisions. For instance, a subdivision called Meadows 9 is located directly adjacent to a subdivision called Jumeirah Park. To walk between two houses roughly 1000 feet away is a 41-minute walk of 2 miles. Jumeirah Park was built by Nakheel, the directly government owned developer. Meadows 9 is part of the Meadows development built by Emaar Properties, which is owned by a past member of government and close friend of the ruler.

The few developments built by smaller scale developers seem to be even more isolated. The Al Muntazah subdivision is a few miles west of Jumeirah Park. It's completely isolated: it connects to the main highway running through Dubai, sharing a narrow two-lane road with several other subdivisions that are separated by several yards of desert. The nearest commercial building, a large mall, is twenty-five minutes away by foot, and ten minutes away by car. However, there are no sidewalks other than in front of houses, so one had have to take a car to get to the mall comfortably. There is a metro station the same distance away, but it would require a car to get there too, and the metro is relatively limited in its usefulness. Surrounding

subdivisions follow a similar format: all are isolated from one another and were clearly built without consideration for how they would work together.

Dubai's use of three government-controlled mega developers for most projects, and the government's ability to regulate the few smaller developers in any way it pleases, presents Dubai with an opportunity to improve the city's street layout. Dubai can certainly learn from the American example of what not to do.

Many American commentators have decried the street design in the U.S., which can often isolate households and require significant car travel. The creation of the Fair Housing Administration (FHA) in 1934 led to particularly wide, long roads in residential areas. The FHA had substantial influence on American neighborhoods as a selective guarantor of private mortgages. The FHA "prohibited gridded streets in residential neighborhoods" and claimed that cul-de-sacs were "the most attractive form for family dwellings."⁴³ Even if homeowners were not interested in FHA mortgages, many developers built homes that would allow future residents to secure FHA-backed loans, and towns also planned according to FHA requirements. Recommendations from the American Association of State Highway and Transportation Officials have resulted in very wide streets that further separate neighborhoods.⁴⁴ Of course, consumer demand plays a significant role in the building of disconnected neighborhoods: it is common knowledge that Americans will pay a premium for suburban homes in cul-de-sacs. Similarly, gently winding roads, which make gridding more difficult, are well-liked by homebuyers.

⁴³ Michael Lewyn, "New Urbanist Zoning for Dummies," *Alabama Law Review* 58, 264, citing Michael Southworth & Eran Ben-Joseph, "Regulated Streets: The Evolution of Standards for Suburban Residential Streets," 35 (Inst. of Urban and Reg'l Dev., Working Paper No. 593, 1993).

⁴⁴ *Id.* at 264.

Dubai's preference for long, often sidewalk-less, streets in major subdivisions likely stems from a reliance on the automobile. The emirate has an absolutely incredible rate of car ownership with .54 cars per person, or 540 cars for every 1000 people. This compares to a rate of .31 cars per person in New York and .213 cars per person in London.⁴⁵ Dubai has the exact same number of cars per person as Los Angeles.⁴⁶ However, the car ownership situation in Dubai is very different from that of Los Angeles. Although neither the World Bank nor U.N. provide a GINI coefficient for the U.A.E., it is well known that hundreds of thousands of the workers in Dubai survive on incredibly little.⁴⁷ Many South Asian laborers earn about \$170 a month, or \$0.59 per hour.⁴⁸ Obviously this large portion of the population does not own automobiles. Assuming that poor laborers account for at least a quarter of Dubai's population, although possibly a much higher percentage, the car ownership rate jumps to over .75 cars per person. What little political power resides outside of the royal family resides with Emiratis and wealthy expats. Both groups likely have a car ownership rate that likely exceeds one car per adult, and hence there is little political demand for anything other than automobile-based transportation.

Although there are efforts being made to discourage automobile use and create more efficient transportation in the U.S., Dubai is unlikely to wean its dependence on the car due to the incredible rate of car ownership by the politically powerful class.⁴⁹ However, a land-use scheme would at the very least allow for more efficient auto travel and the construction of a

⁴⁵ Shafaat Shahbandari, "For every two Dubai residents, there is one car," Gulf News, Mar. 15, 2015.

⁴⁶ Damien Newton, "Density, Car Ownership, and What It Means for the Future of Los Angeles," Streetsblog LA, Dec. 13, 2010, *citing* Mike Manville and Donald Shoup.

⁴⁷ World Bank GINI Index, at: <http://hdr.undp.org/en/content/income-gini-coefficient>; U.N. Development Program Income Gini coefficient, at: <http://hdr.undp.org/en/content/income-gini-coefficient>.

⁴⁸ Lila Allen, "Dark side of the Dubai dream" BBC, Apr. 6, 2009.

⁴⁹ Wisconsin requires every city to consider smart growth principles while planning, *see* Brian Ohm, "Some Key Points About Wisconsin's New 'Smart Growth' Legislation," Jan. 1, 2010; *see also* New York's requirement that the State Department of Transportation apply smart growth principles, N.Y. Department of Transportation, "NYSDOT Implementation of the Smart Growth Public Infrastructure Act."

geographically cohesive urban core. It is not surprising that research in the area of street design has shown that “a street layout can promote interpersonal contact by making it easier for people to find one another and by lowering their travel times. By minimizing waste of scarce downtown land, an efficacious street layout also can increase population densities at the urban epicenter where agglomeration benefits are potentially greatest.” Also unsurprisingly, a gridded street layout makes it easiest to move through and navigate a city, facilitate the interpersonal contact that makes cities desirable places to live, and reduce construction and lot division costs.⁵⁰

The current system of massive subdivisions with only one connecting street create the same problems that individual cul-de-sacs within the subdivisions create. They limit walkability, and require lower density because a greater portion of land is required for curving irregular streets. Cul-de-sacs isolate residents from their neighbors, as an individual has to exit his cul-de-sac onto a larger arterial street, and then seek the one and only entrance to another cul-de-sac in order to visit a neighbor. The cul-de-sac has the overall effect of isolating residents from other residents, transit, and public buildings such as schools.

Despite the benefits of gridded streets and the costs of poorly integrated subdivisions, Dubai does not have to adopt a gridded street design wholesale. The most important quality of gridded streets is arguably connectivity, as connectivity is the main function of streets, and is particularly important in dense urban areas where large numbers of residents move about by car. As it stands now, many subdivisions in Dubai exist with only two lanes of asphalt connecting residents to the larger metropolitan area. Mega developers continue to build subdivisions that are unintegrated into surrounding subdivisions. If this trend continues, Dubai will be a very high-

⁵⁰ Robert C. Ellickson, *The Law and Economics of Street Layouts: How a Grid Pattern Benefits a Downtown*, 64 *Alabama L. Rev.* 462, 481.

density city of subdivision islands which require significant driving to move between them. Dubai would be best served by requiring developers big and small to integrate their developments, and the city-state is in a good position to do so as the government has substantial control over all land-users.

Other Improvements

Dubai's current lack of any land-use regulation puts the city in a position to experiment with any type of urban planning it desires. A New Urbanist designed area could be built and tested and New Urban designs adopted if successful. The city could experiment with form-based codes in new developments. The city could significantly expand its very narrow public transit system that only serves small portions of the city. With its immense oil wealth, the city could even attempt to go carless by creating a highly walkable and transit oriented urban core. The possibilities are endless, and with both capital and complete control, the ruler of Dubai could explore a bold vision of the modern city.

However, the direction Dubai is currently headed in is similar to that of mid-century America: sprawling low-density suburbs radiating from the urban core, with the automobile as the primary means of transportation connecting most residents to the city. This model has resulted in most Americans needing a car, and having to spend significant time commuting. According to the 2009 Census, the average American's daily commute to work is over 50 minutes a day.⁵¹ Dubai is already experiencing more vehicular congestion than Los Angeles, Seattle, San Francisco, and Houston.⁵² There are few things that bring the worst out of people

⁵¹ U.S. Census Bureau, "Commuting in the U.S.: 2009," at: <http://www.census.gov/prod/2011pubs/acs-15.pdf>.

⁵² Shahbandari, *supra* at note 45.

like traffic jams, and if Dubai does not change course, its incredible vehicular congestion and lack of transit alternatives may deter international investment and immigration.

Conclusion

The urban planning world is Dubai's oyster. Dubai can easily achieve many of the benefits of a comprehensive land-use scheme by simply altering the way the government-controlled mega developers build. The government can exercise control over individual landowners as well. Thus, Dubai can exercise more complete control over land use than even the most zoning heavy American city.

Private means of land-use control, such as deed restrictions, will probably not be ideal for Dubai given the city's relatively small geographic area and high-density. Flexibility in development will be necessary for the city to develop cohesively. Although deed restrictions could be altered, such a system adds a layer of difficulty in accommodating the city's rapid development and sprawling growth.

Although Dubai doesn't need zoning to control land use, there are several reasons why some explicit and public form of land-use regulation should be adopted. The most pressing reason to adopt some form of public land-use regime, even if it is an explicit rejection of a land-use regime, is to encourage foreign investment. The current system of land and development rights as a political reward or for the personal benefit of the ruler will discourage foreign investment in the future and erode value by creating uncertainty. Secondly, the use of some land-use regulations, even if not part of a greater land-use regime, can serve to guide construction and development by domestic firms. Much of the new construction in Dubai is piecemeal and

uncoordinated, as exemplified by the isolated residential subdivisions that comprise nearly all of the built area outside the urban core. If Dubai were to adopt regulations laying out requirements for street design, walkability, or transit expansion, the city could increase land values and create a better-functioning city.