



RTPI

mediation of space · making of place

Planning China's Future: How planners contribute to growth and development

Professor Fulong Wu

Dr Fangzhu Zhang

Zheng Wang

Bartlett School of Planning,

University College London

RTPI Research Report no.12
December 2015

Planning China's Future: How China plans for growth and development

Executive summary

In China, planning has never been considered as an obstacle to economic growth. Since the reform era, planning has taken on a much more proactive role in strengthening the economy as well as shaping the market according to the needs of society. The firm confidence among planners and political leaders in China that planning can be a leading force in fostering economic growth is largely due to this proactive interpretation of the role of planning and also stems from political support of planning at the highest level. Planning has become the primary tool for municipalities to attract new industrial and residential developments and strategic plans are a key method to promote areas. Although in some countries regulatory planning mechanisms are often portrayed as obstacles to growth, in the Chinese case it has proven to be indispensable for the long-term economic success of China.

The purpose of this report is to complement the recently published report by Adams and Watkins (2014) on the value of planning using existing case studies from China. The key purpose of this report is to correct the common misinterpretation of planning as an obstacle to economic growth. The report refers to the key theoretical arguments of Adams and Watkins (2014) and uses contemporary case studies from China to illustrate the economic value of planning including the new town developments in Songjiang; industrial developments in Kunshan as well as regional development strategies in the Yangtze River Delta amongst others.

The findings of our research on Chinese planning include the following:

1. One common misconception of planning in Britain is that it is focused primarily on regulating and inhibiting developments from the market. In China, planning has never been considered as an obstacle to economic growth. During the pre-reform era, planning was a largely technocratic profession that assisted the advancement of the economy through the production of detailed drawings and solutions. Since the reform era, planning has taken on a much more proactive role in strengthening the economy. Local political leaders are very keen to initiate new land developments and produce strategic urban development plans in order to foster local growth. Planning in this case has become the primary tool for municipalities to attract new industrial and residential developments and strategic plans are a key method to promote the area.
2. *Stimulating the market through land development in China* – A key means of providing market stimulus is through direct state actions. Chinese municipal governments in this regard are prime examples of urban entrepreneurs who are actively involved in the development urban projects. Whilst in the UK, the shift to urban entrepreneurialism has significantly diminished the capabilities of the planning system by moving away from comprehensive land use regulations and adopting a project-led approach, the Chinese land market and the tax-sharing system provide the necessary conditions and financial incentives for local governments to pursue land development and urban expansions. The direct state actions of these entrepreneurial municipal governments are very diverse and range from the provision of necessary infrastructure, cheap land, and fiscal incentives to the creation and promotion of grand development visions. These planning mechanisms often result in phenomenal economic growth, as Kunshan has risen from a rural and farming based city to one of the most attractive areas in China for both domestic and foreign investments. Similarly Zhengdong has also been able to attract investments from large manufacturers such as Foxconn and to double the size of its cities. Despite the flaws of the entrepreneurial

urban planning approach in China, the Chinese case helps to counter the common perception that planning's role is to contain economic growth and only involves restrictive measures. Planning can be proactive in the development of major infrastructures.

3. *Shaping markets through planning* – Planning in China has become an important mechanism for shaping the market according to the needs of the state and the general public. Although regulatory planning mechanisms are often regarded as obstacles to growth, in the Chinese case it has proven to be indispensable for the long-term economic success of China. Without the market-shaping forces created by regional plans, China could not have been able to regulate the uncoordinated competition between municipalities that would have resulted in far greater costs than any short-term profits. The fierce competition between cities has resulted in their over-expansion, which threatened to destroy the environment and the surplus production of certain industries. In this sense, the value of planning is its ability to prevent or at least significantly reduce the costs of an unregulated market. In order to coordinate the development of the market, planning is used to limit certain market actions such as expanding into ecologically fragile areas. It also fostered the overall competitiveness of the region by encouraging industrial development and the allocation of new land for developing new industrial sectors. In addition to reducing costs, the market-shaping mechanism of planning also allows the government to open up new directions for market development that would otherwise be left untouched by other market actors. The Chinese eco-city initiative, such as the Sino-Singaporean Tianjin eco-city, is a useful case to illustrate the ability of planning to take the lead in tackling environmental challenges whilst trying to meet the rising housing needs of the population and to act as a place promotion mechanism that enables the delivery of large-scale projects.
4. *The role of planning in regulating markets in China* – Another facet of planning is its ability to coordinate development and set up a framework that allows the whole to be more beneficial than the sum of each market actor. The Chinese case is useful to illustrate how the lack of regulatory processes can result in negative externalities including the gradual destruction of the ecology as well as issues of overcapacity and inter-city and inter-regional competition. For Chinese central and regional governments, strategic regional plans are a helpful tool to stop rampant urban sprawl and uncontrolled industrial expansions. Through the production of national and regional spatial strategies, such as the National Main Functional Area Plan, China has managed to more or less slow down urban sprawl and to counteract the country's ecological degradation. An absence of planning regulations would have lead to more severe problems and impacts on the environment.
5. *Building the capacity of planning* - Amongst many other aspects, building the capacity of planning can be understood as improving the mindsets of public planners and ensuring that planning professionals are well connected to a broad social network of other market actors. In the Chinese context, planning is widely considered as a tool that can facilitate growth and thus enjoys great popularity amongst political leaders. This firm confidence that planning can be a leading force in fostering economic growth is largely due to the proactive interpretation of the role of planning and also stems from political support of planning at the highest level. Chinese planners are highly market aware and take on a very proactive role in encouraging economic development. The mindset of planning in China is based on visionary planning for the future. The emphasis is for planners to take on the leading role in facilitating developments, by proposing vision for the future of Chinese cities and then to develop achievable targets through action plans. One way of increasing the trust relationship between different actors is to include other stakeholders in the plan-making process but also to break down existing stereotypical views towards planners and the profession of planning.

In order to increase the capacity of planning, Chinese planning departments often collaborate with various market actors (such as professionals, private developers and domestic market actors) during the plan making process, in order to first exchange knowledge on how to create better places and secondly to establish a relationship of trust. For instance, the inclusion of international consultancies means that Chinese developments can learn from foreign best practice but more importantly it would help a local project gain global recognition. This in turn increases the development's credibility and attracts the attention of investors and the central government's approval and support. For most urban development projects, Chinese planning departments would be cooperating with domestic consultancies and most importantly universities and research institutions. Finally, public display of urban plans and strategic visions for the city strengthens the confidence of planners and reaffirms their position in the entire process of creating prosperity.

6. *The economic impact of planning* - The impact of planning in China is wide reaching and cannot simply be understood as higher GDP growth. More importantly whilst planning is often being associated with economic costs for the general public as well as the government, planning also represents development and the creation of economic value. Value in this sense has multiple dimensions. The cases of Wuxi Taihu new town and Songjiang both illustrate how planning and land development can be effectively utilised to create new housing catering to various population groups as well as offering employment opportunities in these new satellite towns. Planning in this sense has effectively turned the demand for housing into an impetus for development and economic growth. In addition to housing and employment, the case of Zhangjiang High-tech Park further shows that planning is an important mechanism that facilitates innovation and regional competitiveness in China. By including the Zhangjiang High-tech Park into the city's urban development plan and financing its construction through land development, Shanghai has been able to establish itself as an important location on the global pharmaceutical market as well as foster biotech innovation and the development of biotech companies. The evidence from China's housing market also reveals that the regulatory nature of planning does not represent poorer economic performance, which is the current perception of planning in some countries (Cheshire et al. 2012). The central government adopts regulatory control of housing prices to ensure that housing prices are increasing at a natural pace rather than being driving by an artificial housing bubble. Consequently from the Chinese perspective, although regulation does not directly result in more economic growth, it also prevents any potential large-scale losses that would otherwise be much greater than the short-term gain from housing market speculations.

Implications for policy

Evidence from China reflects the significant social and environmental values that a robust planning system can deliver. The report does not intend to provide any specific instructions on how to create value through planning as the Chinese case has its own political and economic uniqueness, which cannot be replicated to another context. While the Chinese planning system is not a perfect model of best practices to be followed by other places, the Chinese planning experience nonetheless reveals the problems that can arise in the absence of stronger regulatory capacities. On the other hand, the rationale of growth-oriented planning in China provides strong evidence that planning by its nature and a wide spectrum of associated activities can be supporting growth. Through transforming planning practices and enabling planning capacities, city planning can play a leading role in generating economic value.



Extreme liberalisation of the planning system should be avoided, as this would weaken the ability of planners to shape the market and its actors. From the Chinese experience it can be seen that the fierce competition between cities required a strong regulatory mechanism to coordinate developments and reduce the potential cost of excessive urban expansions. Instead of solely relying on private initiatives and waiting for the development proposals from private developers, planning should be given the financial support to lead new developments. Financial support in this case can be interpreted in multiple ways. In the Chinese context, planning can also lack financial capital to initiate developments however, the monopolistic land ownership of the state gives municipal authorities the ability to use land as a collateral to raise capital through the private market.

The UK and China have recently committed to building a global comprehensive strategic partnership, including cooperation on economic development and on some projects and investments that form part of major initiatives such as the National Infrastructure Plan and the Northern Powerhouse on the UK side. As both countries look to learn from each other, the findings from China may be useful to provide a more positive interpretation of planning and help counter the common perception that planning is a passive obstacle to economic growth. Whilst planning in Britain is currently regarded as a passive control mechanism that slows down economic growth and hinders the private sector, Chinese private developers rely on the government and its planners to spearhead any large-scale developments since the involvement of the government significantly reduces risks. In this sense, planning is considered as the agent of economic growth and development in China, a mindset that has been deeply embedded into political leaders, planners as well as the wider public.

Contents

1. Introduction	7
Part I: What does ‘planning’ mean in China?	8
2. The scope of planning in China	8
3. Stakeholders in Chinese planning	9
3.1 Central government	9
3.2 Regional authorities	10
3.3 Municipal government	10
3.4 Public	10
3.5 Universities	11
3.6 Private sector	11
3.7 Summary	11
Part II: The relationship between planning and the market in China	12
4. Stimulating the Chinese markets through land development	12
4.1 The role of planning in stimulating industrial growth in Kunshan	13
4.2 Attracting investment and growth in Zhengdong New District	15
4.3 Summary	16
5. Shaping markets through planning – experience from China	17
5.1 Fostering regional competitiveness: The Yangtze River Delta Regional Plan	17
5.2 Strategic market transformations and place promotion – the case of China’s eco-cities	18
5.3 Summary	20
6. The role of planning in regulating markets	20
6.1 Regulating growth in China through planning	21
6.2 Inter-regional and regional strategic plans	22
6.3 Summary	23

7. Building planning capacity in China	24
7.1 <i>Changing the mindset of planners – planning as an agent of growth</i>	24
7.2 <i>Creating market-rooted networks and extending the capacity of planning</i>	24
7.3 <i>Summary</i>	25
Part III: The economic impact of planning	26
8. The impact of planning on China's development and economic growth	26
8.1 <i>Planning for housing and employment – New town developments in China</i>	26
8.2 <i>Planning for economic development - The case of Zhangjiang High-tech Park</i>	30
8.3 <i>Planning and the Chinese housing price market</i>	33
8.4 <i>Summary</i>	34
9. Conclusion	34
References	36

1. Introduction

The purpose of this report is to complement the recently published report by Adams and Watkins (2014) on the value of planning by providing case studies from China to illustrate the theoretical arguments. The report re-interprets the Chinese planning practices in order to render the role of planning in fostering growth more visible. One core theme of this report is to explain how planning in China has managed to adapt to a market-based economy and established itself as a key mechanism for generating economic value. Whilst of course the success of planning is dependent on the specific political economic context of China, there are still aspects of planning that can be useful to countries such as Britain (and particularly England) where planning has been suffering from inaccurate perceptions as being an obstacle to economic development.

Before illustrating how planning has been used as a tool for economic growth, it is firstly necessary to conceptualise planning in the Chinese context and identify its main stakeholders. Part one briefly explains the scope of planning in China followed by an introduction of the key stakeholders involved in the plan-making process. The second part then elaborates on the wide range of planning functions that are at the disposal of the Chinese government and how they have been used to facilitate economic growth. In detail, part two examines the abilities of planning to shape markets, stimulate market behaviour as well as regulating market forces. Moreover, it provides case studies on how the capacities of planning and public planners can be strengthened. Finally, part three outlines some of the key achievements of planning in terms of fostering economic development and focuses on three key aspects that stand at the top of the government's agenda. The three aspects include the impact of planning on creating housing and employment; facilitating innovation through planning and the relationship between planning and the housing price market.

The report will conclude with key findings from the Chinese experience and how they can be helpful for countries such as the UK to re-interpret the value of planning.

Part I: What does 'planning' mean in China?

2. The scope of planning in China

The meaning of planning incorporates many forms of activities and has been discussed thoroughly by Adams and Watkins' (2014:11) report where they describe planning as an *"activity of some considerable breadth, both in theory and practice"*. The purpose of this section here is not to reiterate existing arguments but instead focus on what the meaning of planning is in China and how it has transformed since the post reform era. By doing so the objective is to provide a better understanding on how larger socio-political changes may influence how governments and the public interpret the scope of planning. The suggestion by Adams and Watkins (2014:9) to understand planning and to think about its broader purposes rather than solely focusing on its methods is particularly helpful here to capture the meaning of planning in China.

During China's socialist era, planning largely played a supplementary role by providing technical drawings and solutions to the objectives set out by the economic strategies of the government (Wu 2015). The activities of planning in this sense were mostly restricted to producing blueprints and support the targets set by a separate process of economic planning. As part of the economic planning objectives, city planning was also successful in assisting the state-led industrialisation goals. Another purpose of planning during the socialist era was to promote the state through the construction of grand monuments in order to reflect the "superiority and achievements of socialism" (Smith, 2008). Since planning during socialist China was not designed to lead and capture the benefits of development, investment into infrastructure was considered as a financial burden (Wu 2015). However, despite its complementary role, planning was not seen as an obstacle to economic growth since its activities were outside of political processes.

This mentality changed gradually since the reform era, where China steadily adopted a market-oriented approach towards the development of the economy. Planning became a very important means for municipal governments to be actively involved in the local economic development as favourable spatial strategies attracted many manufacturing industries and thus increased the local GDP. By emphasising land development as a mechanism for facilitating growth, the purpose of planning has changed from materialising economic strategies into shaping and driving economic development.

Broadly speaking, planning in China serves three key functions. Firstly, for municipal governments, planning and land development form a vital source of local revenue (a more detailed explanation of how land development is linked with local economic growth is presented in section 4). Since the post reform era, municipalities are now responsible for a large share of local expenses such as public and social services, thus placing pressure on local leaders to generate financial resources. Due this reason, municipal governments are very keen to spearhead new developments and therefore municipalities represent the key driver of economic growth in China. However, given that all municipalities are eager to attract investments for land developments, fierce intercity competition is bound to occur and calls for planning interventions at a higher scale to manage developments in a more efficient manner.

This leads to the second key function of planning in China. National and regional level plans have been reintroduced in order to reduce the competition between different cities and to coordinate urban growth and industrial developments. The role of coordination is largely reserved to the national and regional tier of governments and can be considered as rescaling and reclaiming some of the development powers that have been previously devolved to city authorities.

Finally, the third main purpose of planning in China involves strengthening the authority of the state through the mechanism of planning. According to Wu (2015) although the purpose of planning in China is to generate economic growth, another unspoken truth is that the urban expansion also simultaneously reinforces the power of the government. This is because ultimately the purpose of economic development is to increase the tax revenue of the state. This is in stark contrast to a liberal market context, where the general assumption is that only the market can realise the true value of planning. From this perspective, the state and its planning apparatus should only assume a supportive role and not become an obstacle to growth. Planning powers should not go beyond providing a general framework of guidelines that serve to offer a certain degree of certainty to the market. In comparison, planning for growth in China does not automatically mean planning for the market. Instead its purpose is to strengthen the state through capital accumulation.

3. Stakeholders in Chinese planning

Planning in China involves various stakeholders who each hold different interest and also experience differences in terms of their input into the planning process and what they hope to gain from its outcomes. The purpose of this section is to briefly introduce some of the key stakeholders of planning in contemporary China and how they are related with each other. It is important to note that this is not an exhaustive list of all stakeholders but rather a mind map of how planning decisions and processes are shaped by which key actors and through which means.

3.1 Central government

Most of the plan-making powers in China rest within the central tier of the government where three departments are simultaneously responsible for carrying out different conventional functions of planning; they include the Ministry of Housing and Urban-Rural Development (MOHURD), National Development and Reform Commission (NDRC), Ministry of Land and Resources (MLR). Amongst the three departments, MOHURD is the closest to the conventional function of planning and has the longest tradition in producing urban plans. One of the key responsibilities of MOHURD is to coordinate developments and the provision of housing targets whilst the MLR is concerned with the creating of land use plans that ensure that rural land use is protected. Finally the NDRC holds the responsibility of approving the financing of large-scale projects as well as coordinating developments at the regional scale. The system of development and reform commissions originated from the 'planning commission' in the centrally planned economy, which prepared five-year economic plans, decided the budget and allocated funding for development.

Although all three government departments each hold very own unique responsibilities in the planning system, their jurisdictions also overlap in certain cases. For instance MOHURD and NDRC both prepared regional plans for the Yangtze River Delta region with the objective of reducing the competition between different cities and to provide a strategy that can strengthen the overall economic development of the region. However, whilst MOHURD's Yangtze River Delta Urban Cluster Plan Project could not manage to make a lasting impact on the planning strategies of municipal authorities located in the Yangtze River delta, the regional plan produced by the NDRC was considerably more successful. One key reason why the Yangtze River Delta Regional Plan (which will be discussed in more detail in section 6) produced by the NDRC was more successful is related to the fact that the NDRC had the authority to approve financial investments into municipal development projects. Although currently the governance structure of planning at the central level is still fragmented, one main commonality amongst the three departments is that they all aim to introduce some order to the mostly uncoordinated urban expansions initiated by municipal governments. Planning at the central level is thus much more concerned with balancing ecological and social objectives with economic growth.

3.2 Regional authorities

Provincial governments share a similar objective with the national government and aim to reduce inter-city competition. Provinces such as Guangdong have the duty to produce regional plans but these plans are often funded and co-produced by the national government (such as NDRC or MOHURD). However, in addition to coordinating developments, provinces are simultaneously interested in raising the competitiveness of their own region and outperform other regions. For instance, the city of Kunshan, which is under the administrative jurisdiction of the Jiangsu province, was competing against Shanghai for new investors and received active support from the Jiangsu province. As a consequence, the state chose not to strengthen the planning powers of regional authorities but instead rely on regional plans in order to avoid competition between different regions in China.

3.3 Municipal government

Under the Chinese context, the municipal government can be considered as the engine of economic growth since the revenue of the city is dependent on the land development rate. Local political leaders in this case play a key role in initiating new development projects, as this is firstly the most effective way to showcase their contribution to the local economy but also a very helpful means to convince the central government of their personal capabilities. The municipal planning department plays a more supportive role in materialising the vision of the local political leaders and produce viable development plans. However, the role of the planning department is not always limited to providing support to local leaders but instead it is also actively involved in the production of strategic visions and policy recommendations.

3.4 Public

The public in China is often more involved during the planning dissemination stage rather than the plan-making stage. However, it would be misleading to assume that the public is completely excluded from the planning process. During the socialist era, although the planning was an internal procedure and did not directly involve any members of the public, any planning decision were made after thorough consultations with each work-unit that represented the needs of residents of their respective neighbourhood.

Since the transition to a market-based economy, planning involved a wider range of stakeholders, which also includes the public. Municipal governments often organise big events to showcase their newest development plans to local population in order to strengthen the public trust in the success of the project and also in the performance of the city authority. The assumption of the government is that the general public would also benefit from the trickle down effects of any successful development projects. However, many Chinese planners have noted that more direct involvement of the public is needed during the plan-making process in order to ensure that local needs and opinions are sufficiently reflected in the development vision of the city (Wu 2015). The not-in-my-backyard ('NIMBY') mentality is not widespread amongst the public although local resistance to development is growing due to increasing concerns about the environmental quality. In particular, the link between welfare provision and local economic growth means that infrastructure and services of the locality are dependent upon the level of economic development, which prompts residents to be cooperative in development planning.

3.5 Universities

There has been a long tradition of involving universities and research institutes into the process of developing new master plans and creating future visions of cities and regions. Since the late 1970s the number of planners has been steadily increasing from around 3,000 to 10,000 in 2011 (China Society for Urban Studies 2013:299). Similarly educational programs for undergraduate planning have increased considerably from around 10 in the 1970s to more than 150 programs in 2009, which has also transformed the degree programme of planning into a first tier discipline.

With the increasing demand for planning professionals, the planning programme now shares the same status as Architecture and Geography whilst prior to that period, planning was a sub-discipline at the second tier under the larger program of Architecture. Universities therefore not only produce professionally trained work forces for the planning profession but are also closely connected with the plan-making process itself thus often providing students, especially at the postgraduate levels, to participate in real development projects.

3.6 Private sector

The private sector in China is very diverse and includes professional residential developers, large industrial and manufacturing companies, foreign investors such as Foxconn but increasingly also smaller firms that focus on innovation and research and development such as pharmaceutical research companies in Shanghai. Similarly to liberal economies, the private sector is also the prime target for municipalities who hope to attract as many private sector companies as possible to their locality in order to boost the local economy. Private developers therefore base their investment choices on the willingness of local authorities to offer financial incentives but more importantly on the vision of local leaders in terms of the future plan of the area. For the private sector, planning plays a crucial role in offering market stability but also new investment opportunities. In a sense, urban development in China is jointly driven by a coalition between local municipalities and the private sector.

3.7 Summary

Many stakeholders are involved in the development of Chinese cities and each of them holds different interest in the outcome of the project. Amongst all the stakeholders involved, the state represents the main driver of land development and economic growth. Despite the emphasis on creating order and regulating developments, the national and regional tiers of governments are still keen on pursuing GDP growth albeit in a more coordinated fashion. For municipal leaders, the aim is to encourage urban expansion and often the local strategic plans are created in collaboration with universities and international firms. By showcasing the new development plans of the area to an international audience as well as the wider public in China, local governments hope to upscale their developments and gain the approval of the central state. The promotion of urban plans thus also involves the public although more direct involvement in the plan-making process is still needed. Nevertheless, China's planning system and its close association with economic activities has made planning an effective mechanism for many stakeholders to create value.

Part II: The relationship between planning and the market in China

4. Stimulating the Chinese markets through land development

The public and especially politicians in the UK sometimes associate planning with stringent regulations and limitations that prevent economic growth (Allmendinger and Ball 2006; Barker 2006). However, as articulated by Adams and Watkins (2014), planning incorporates much more than regulatory activities and also has important functions in stimulating and shaping markets and opening up new market opportunities. In an ideal setting, stimulating the market through planning mechanism should benefit both the demand and the supply sides and produce added value to the shareholders of the development as well as wider stakeholders in those areas where it is focused. Adams and Watkins (2014:38) identify four planning mechanisms that are effective in stimulating development including *direct state actions*, *price-adjusting actions*, *risk-reducing actions* and *capital-raising actions*. Whilst all these methods of stimulating the market are being utilised in China to a greater or lesser extent, the most dominant form of market stimulus is direct state involvement. The rationale for the government to get directly involved in the development of projects is because simply by allocating developable land may not be a sufficient incentive for the private sector to invest in new projects. The reasons could range from lack of infrastructure and other public amenities to land ownership restrictions, which are all significant barriers preventing developments. In order to increase the incentive for the private market the government thus needs to take on a proactive role by removing as many obstacles to development as possible.

Chinese municipal governments in this regard are prime examples of ‘urban entrepreneurs’ who are actively involved in the development urban projects. Whilst in the UK, the shift to ‘urban entrepreneurialism’, defined as a proactive, economic role for urban governance in the context of globalisation (Harvey, 1989), has significantly diminished the capabilities of the planning system by moving away from comprehensive land use regulations and adopting a project-led approach. However, the very opposite took place in China as planning authorities, especially at the city level, started to thrive under urban entrepreneurialism. The rise of entrepreneurial city governments can be partly explained by the central government’s existing performance evaluation system, which places great emphasis on the local economy thus prompting government officials to focus on GDP growth.

Another important reason for local government leaders to adopt a pro-urbanisation and pro-growth approach is due to financial pressures of the municipalities to balance local revenue and the expenditure for maintaining social and public services (Chien, 2008). Since 1994, the tax-sharing system was introduced and separated the tax sources of the central and local government. The system allows local governments to retain only 25 per cent of value added tax but instead all extra budgetary revenues and more importantly the revenue from the ‘sale’ of land can also be kept by local governments. The Chinese land market and the tax-sharing system thus provide the necessary conditions and financial incentives for local governments to pursue land development and urban expansions. In addition to releasing cheap land to the manufacturing industry, local governments would also provide infrastructure and other amenities in order to attract domestic and foreign investments (Tao et al., 2010).

However, land revenue is not the only incentive as in many cases local governments are willing to release land for industrial developments at a very low price or sometimes even for free. The benefit of doing so is twofold. Firstly, by attracting industrial development, the local government can rely on the long-term value added tax revenue (of which they can retain 25 per cent) rather than profiting from a single land release transaction (Tao et al., 2010). In addition to the long-term revenue stream, the local government can also expect to profit from the potential ‘spillover effect’ of industrial

growth such as increasing demands for housing, retail and commercial space. Local governments would further benefit from the resulting increase in residential and commercial land value considering that they can also keep incomes from retail sales tax.

Furthermore, the Land Administration Act enables the local government to be the monopolistic land supplier as they also have the power to compulsory purchase low-cost rural land and then subsequently convert and resell them as prime urban land at a significantly higher price tag. The gap between rural and urban land value thus forms a key source of income for local governments. In order to improve the promotion of industrial developments, strategic spatial plans have become a very effective tool to outline the vision of the municipal government. They would also assist in convincing the central government for approving larger schemes. These spatial plans have come to be called 'non-statutory' or conceptual plans since they do not hold a statutory status. Instead the conceptual plan is a very useful means to convey the vision of local leaders and to promote the area as an attractive investment opportunity. Consequently, the strategic non-statutory plan is also less detailed compared to the master plan in terms of land use allocation, for instance. Instead of focusing on land uses, the conceptual plan is much more growth-oriented and places great emphasis on economic functions and new developments. Considering the numerous benefits of attracting industrial development, the majority if not all local governments have produced 'non-statutory' strategic plans. The Kunshan strategic plan and the Zhengdong design-led plan are two very useful examples to illustrate how planning can be utilised to stimulate economic growth.

4.1 The role of planning in stimulating industrial growth in Kunshan

The city of Kunshan is situated on the lower reaches of the Yangtze River Delta and very close to Shanghai although both are under different administrative jurisdictions (Shanghai to Kunshan only takes 20 minutes by intercity train). During the pre-reform era Kunshan was largely characterised by its rural land and lagged behind other cities in the Yangtze River Delta region. However, with the shift towards a market-led system Kunshan's local leaders sought to transform the city by attracting domestic and foreign investments from the industrial sector (Wei, 2002). Finally, the county gained its city status¹ in 1989 and further spurred the municipal government to pursue export-oriented growth and industrial developments. In the case of Kunshan, the urbanisation process was entirely bottom-up driven and attracted both domestic and foreign investments. The growth in GDP since the mid 1980s and during the 1990s was phenomenal as Kunshan was ranked ninth in comprehensive economic strength among all Chinese counties in 1995 and in 1998 Kunshan placed number one amongst all counties in Jiangsu for attracting \$500 million foreign investment (Wei 2002).

The reason for the tremendous economic growth of Kunshan can be accounted to two major advantages the city holds. Firstly the city's close proximity Shanghai was a deciding factor for many factories to move to Kunshan as one of the key strategies of Kunshan municipal leaders was to attract development by providing considerably cheaper land price compared to Shanghai (Chien, 2007). Consequently, a large number of newly arriving industrial factories comprised of companies that wished to relocate back to Shanghai but due to stringent controls and higher prices instead settled in Kunshan. Figure 1 shows the development of the new town, known as Huaqiao, where a cluster of electronic industries have been built.

¹ In China the county is a basic unit of local governance, which belongs to the rural administrative series. The city is an urban administrative unit, which often enjoy more advantageous and more autonomous decision-making because of the long-term bias against rural areas in order to support the state's strategic industrialisation.



Figure 1. The development of electronic manufacturing industries in Huaqiao new town of Kunshan, near Shanghai. Photo by Fulong Wu.

Another major thrust of developments was initiated by foreign industries from Taiwan, specialising in labour-intensive manufacturing industries (Wu 2015). The second major factor that determined Kunshan's economic success was its more flexible governance as the city's lower administrative rank enabled more autonomy from the central government. Due this reason, Kunshan also had more freedom in devising strategic plans and freeing up industrial land to attract investments. The Kunshan development zone is a good example of the entrepreneurial approach of local leaders as it was an entirely self-funded development that was introduced without the approval of the upper tiers of government and only acquired its formal status by the central government several years later (Chien 2007).

However, the expansionist approach of Kunshan's vision also meant that lack of developable land would eventually become an issue. In 2009, the built up area of Kunshan reached 400 square kilometres, which makes up almost half of its total territory of 927 square kilometres. Problems of urban sprawl have prompted the Kunshan government to develop the Kunshan Master Plan (2009-2020) with the intention to balance the thrust of expansion with development constraints. The new master plan set up three major zones, each with a different policy emphasis and also included environmental performance. After decades of intercity competition with Shanghai, the new plan also recognised the need for intercity coordination and thus seeks to establish new transport connections and stronger collaborative relations with Shanghai, and received the International Society of City and Regional Planners (ISOCARP) prize of the year in 2011.

4.2 Attracting investment and growth in Zhengdong New District

Similar to the case of Kunshan, the development of the Zhengdong New District sprung from the vision of the municipal government of Zhengzhou. Zhengdong literally means the East of Zhengzhou, which is the capital city of the Henan Province and is considered a 'second tier' city compared to coastal cities such as Guangzhou and Shenzhen (Xue et al., 2013). The by then new municipal leader wished to pursue a different development strategy of its predecessor, who established the Zhengzhou High-Tech Development Zone in the west of Zhengzhou, and sought to create a new Central Business District (CBD).

The relocation of a military airport was a good opportunity to introduce Zhengdong New District, which ultimately added an additional 150 square kilometres to the existing 133 square kilometres of urban built-up area in Zhengzhou (Wu 2015:93). In an environment where many cities strived to attract investments through financial incentives and strategic plans based on grand visions, the Zhengdong New District plan stood out from its peers by adopting a design-led master plan. In 2001, the municipal government launched a design competition for the master plan of Zhengdong new district, which the well-known architect Kisho Kurokawa won. The scheme developed by Kisho Kurokawa placed great emphasis on design and morphology and envisaged a cluster of over 60 high-rise buildings surrounding the CBD area as well as an artificial lake in the centre (Figure 2). This design-led plan making greatly differed from conventional masterplans, which only focused on land-use allocation and the connection between different functional areas. In addition, the great visual effects helped the development to convey the visions of the local government in a very effective manner.



Figure 2. The central area of Zhengdong new district, where a Conventional and Exhibition Centre has been built. Photo by Fulong Wu.

Although the masterplan is also flawed in several aspects, such as poor accessibility for pedestrians in the CBD area and further constraining the water sources in the area (for a more detailed critique see Xue et al. 2013), there are also some positive experiences from the Zhengdong case. Firstly the entrepreneurial approach towards financing the Zhengdong scheme is a good illustration of how the government can stimulate the market by shouldering some of the infrastructure costs and establishing a more investment-friendly environment. In order to finance the infrastructure, the Zhengzhou municipal government raised the necessary funds through the capital market, as the relocation compensation of the military airport was minimal compared to the infrastructure costs and no central government funding was available. By setting up a development corporation the local government was able to firstly lease the land along roads to developers who in return had to construct the roads.

In addition, the development corporation also used land value to secure loans from the bank. After constructing the necessary infrastructure, it is then possible to pay back the loan using the profits of reselling the land at a higher price (Xue et al. 2013). Amongst the many private investors, in 2010 the Zhengzhou municipality also managed to attract investment from Foxconn (a major contractor for Apple) to establish a manufacturing plant for around 200,000 staff members (Wu 2015).

4.3 Summary

This section sought to use some of the insights gained from the Chinese planning experience to strengthen the argument that planning does not only represent stringent regulations that constrain economic growth. Instead, there are many planning mechanisms that are very effective in stimulating the market and encourage developments that are beneficial to the local area (Adams and Watkins 2014). This report focused on one type of market stimulation, namely direct state actions, as this is by far the most prominent mechanism applied in Chinese planning. Nevertheless it is important to note that other forms of market stimulation such as risk reducing and capital raising measures are also present in China. The direct actions of the municipal government have especially become the most dominant driver of local economic growth since land development forms a major part of local revenues and is also beneficial for local leaders who wish to leave a lasting legacy after their tenure.

Although urban entrepreneurialism has resulted in the streamlining of the British planning system, its effect on the Chinese planning profession has been the direct opposite. The direct state actions of these entrepreneurial municipal governments are very diverse and range from the provision of necessary infrastructure, cheap land, and fiscal incentives to the creation and promotion of grand development visions. The grandeur of these schemes often surpasses the city's boundaries and would incorporate city-regions as can be seen from the Kunshan and Zhengdong experiences. The resulting economic growth is often phenomenal, as Kunshan has risen from a rural and farming based county to one of the most attractive areas in China for both domestic and foreign investments. Similarly Zhengdong has also been able to attract investments from large manufacturers such as Foxconn and to double the size of its cities.

However, it is important to note that the entrepreneurial approach towards local development also carries major deficiencies including fierce inter city competitions and the endangerment of the ecology. Such problems will require the regulatory powers of planning and will be discussed in detail in section 6. Despite flaws in entrepreneurial urban planning approach in China, there are some lessons that may be of value. Firstly, the Chinese case helps to counter the common perception that planning's role is to contain economic growth and only involves restrictive measures. Planning can be proactive in the development of major infrastructures. Secondly, it uses some concrete examples of how direct state actions can be realised such as the production of strategic plans or raising funds

through the private market. Although the specific measures here may not be transferrable, it may encourage practitioners to consider alternatives. Finally, the case also effectively illustrates some of the drawbacks of a planning system that is only focused on economic growth and thus also reaffirming the importance of regulatory planning.

5. Shaping markets through planning – experience from China

The essence of planning policies that aim to shape the markets is the belief that a coordinated approach towards the development of places can be more resource efficient during its process and achieve greater impact for its outcomes (Adams and Watkins 2014). The failure to integrate and coordinate certain market actions may often result in very costly consequences since for instance private developers may only focus on the immediate returns of developments whilst neglecting its long-term benefits. Adams and Watkins (2014:22) provide a comprehensive list of potential costs of failures in their report, which all indicate that the lack of coordination can result in an overproduction of social costs and the underproduction of social benefits. This is known as a 'collective action problem', which not only affects the provision of public benefits but also have a negative impact on private profitability, therefore resolving such issues is highly desired by the private sector as well.

Moreover, investors and developers are keen to have more information about the likely future development plans of areas as they can introduce more stability to the real estate market (Barker 2006; Bell, 2005; Adams and Watkins 2014). There are various ways that planning can shape the markets amongst which the creation of plans and the provision of strategic market transformations are particularly well illustrated through the Chinese example. The production of spatial plans, visions, planning frameworks and policies amongst other are particularly useful tools for the government as the 'plan maker' to display their vision and wish of how the area should change over time. The priority of plans is not to achieve this vision by solely relying on the government's own capacity but instead the endeavour is to attract other market actors and stakeholders to take part in this process and support the implementation of this vision. Amongst others, it is important for plan-makers to ensure that visions are also well connected with existing policy instruments and policy incentives. An example that supports these arguments particularly well is the case of the Yangtze River Delta Regional plan.

5.1 Fostering regional competitiveness: The Yangtze River Delta Regional Plan

As argued by Adams and Watkins (2014:21) the core of any market shaping is the belief that the whole can yield greater benefits than the sum of the parts. This was also the conviction of the central government when devising the Yangtze River Delta Regional plan. In China, the Yangtze River Delta Regional Plan is perhaps one of the most well known strategic plans at the regional level with the aim to provide a more integrated approach towards urban development. It was introduced against a background of intense inter-regional and inter-city competitions as well as growing administrative fragmentation. The plan was financed and produced by the powerful NDRC in 2005 but also included a commission consisting of various local governments in the region. The plan itself addressed the provinces of Jiangsu and Zhejiang as well as the municipality of Shanghai, which is under direct jurisdiction of the central government. The region incorporates three provincial level governments, 24 prefecture level urban governments, 49 county level city governments and 61 county governments.

The Yangtze River Delta Regional Plan was approved by the State Council in 2010 and has gained considerable influence since its implementation. The NDRC envisaged a coordinated Yangtze River Delta that would be able to compete as a regional entity that excels through its service industries.

GDP growth in the region is the clearly defined development target of the plan. In order to realise this vision, one of the key emphasis of the regional plan is to promote economic restructuring and the upgrade of export-oriented manufacturing industries.

The plan greatly differs from previous five-year plans as it also includes a vision of the spatial structure consisting of 'one core with six belts', which assigned specific functional roles to cities. The regional plan is very comprehensive since it covers the local economy, social development, infrastructure schemes, urbanisation, public services and land use amongst others (Wu 2015:132). Furthermore, from a regional context, the plan also proposes a strategic plan for each city whereby its content differs considerably from the plans developed by the local municipalities. However, although the regional plan imposes a top-down requirement, local governments also had the opportunity to contribute to the plan-making process.

Although the plan itself does not have statutory status, it is nevertheless highly influential in the region, as the State Council has approved it as an official document. Furthermore, provided that the NDRC is in charge of resource allocation for developments in cities, the NDRC can always refer the official documents and its stated local development preferences when granting large projects. For instance, in order to preserve the environment, metallurgical plants are mostly prohibited in the Yangtze River Delta or only restricted to certain areas. Through this project-approval based incentive the central government endeavours to address the persistent issue of industrial over-capacity in the region. The industrial over-capacity is a result of individual cities all investing heavily into specific sectors such as iron, steel and petrochemicals in order to boost their revenue return, finally leading to the 'assimilation of industrial structure' (*chanye tonggou*) in the Yangtze River Delta (Zhang and Wu, 2006). The result of central government efforts to create an integrated regional development plan helps to define a strategy for the division of labour.

5.2 Strategic market transformations and place promotion – the case of China's eco-cities

A further tool in coordinating market actions is the strategic transformation of the market and is particularly effective in delivering large-scale developments that are otherwise hard to attain by any single market stakeholder. In practical terms, market transformation is often carried out in the form of financial incentives from the government, which forms a solid financial basis for individual market actors to contribute further. This could include public investments into the infrastructure or other forms of public facilities. An integral component for any successful strategic market transformations is the existence of a 'place promoter' who can be either the local government but also public-private organisations (Adams and Watkins 2014:25). During the development process, the place promoter needs to ensure that the vision is adequately supported by a variety of market actors through building up a strong level of trust and confidence in the project as well as attracting sufficient demand.

The Chinese eco-cities case is a very useful illustration of the importance of planning as a place promotion mechanism that enables the delivery of large-scale project, which would otherwise be hard to implement by any single market actors. Without any government initiated plans to invest into eco-friendly developments there would have been fairly little incentives for both private developers and municipal governments to build eco-friendly housing given the level of uncertainty and potential costs. However, through the market incentives provided by the central government, local municipalities now have the desire to come up with more developments that are geared towards reducing carbon emission and energy consumption.

Low carbon and environmentally friendly projects have become one of the Chinese government's key policy responses to the increasing international pressures for China to reduce its carbon

emissions. Whilst developments concerned with environmental and ecological qualities also existed prior to the eco-city concept, they were of significantly smaller scale and did not attract as much attention from municipal governments and the private sector. However, when the Ministry of Housing and Urban-Rural Development (MOHURD) introduced the new concept of 'low-carbon eco-cities' and promoted its development through both policy regulation and substantial financial incentives, the interest in developing eco-cities rapidly increased (Wu, 2012). Nevertheless, it would be inaccurate to describe the Chinese eco-city development as completely top-down driven since municipal governments are actively involved as the promoter of new environmental friendly schemes. The movement involves both the central government as the key agent to shape and facilitate the market of eco-city schemes and local city authorities as the promoter of eco-city developments in order to attract the financial support and the involvement of other market actors. By 2011, over 250 cities have proposed to develop eco-cities or low-carbon cities (Li and Liu 2011). Inevitably some of these proposals were using the banner of eco-city to attract more central government funding whilst only superficially adopting some of its core ideas. Nonetheless, the policy initiative also created many large-scale eco-cities that are closer to the ideals of the central government and also attracted international attention. The Tianjin eco-city case study in this report may not be necessarily the most successful amongst its kind but it is suitable in the sense they reveal how the various local and national planning mechanisms have helped facilitate their developments.

Sino-Singaporean eco-city in Tianjin

The Sino-Singaporean Tianjin eco city is one of the largest collaboration between the Chinese government and the government of another nation. In practice, the eco city development was carried out by a joint venture between the Tianjin TEDA Investment Holding Group (a state owned development corporation) and a Singaporean state-owned enterprise as the representative of the Singaporean government. The project itself is situated in the Tianjin Binhai New District, which is 45 kilometres away from the city centre of Tianjin. The New District is one of the areas that received strategic support from the central government and covers an area of 30 square kilometres, which is roughly 1/20 the size of Singapore. Using the eco-city concept, the land that was chosen for construction is 'unusable' since one third consists of deserted saltpan; one third of saline-alkaline non-arable land and one third is an area that had been previously polluted from the release of industrial wastewater. Both governments jointly formulated the master plan for the eco-city and the Chinese Academy of Urban Planning and Design carried out the overall design, which envisaged a planned population of 350,000 by the year of 2020.

A key highlight of the Tianjin eco-city is that it has incorporated a wide array of new environmental friendly technologies that aim to reduce energy consumption, provide alternative energy production as well as changing consumer behaviours. From the planning perspective, the Tianjin eco-city adopted a Transit-Oriented Development approach combined with a system of slow transport that separates cars and pedestrian traffic. Moreover, the provision of large amounts of green space that are easily accessible by foot further strengthen the image of an environmentally friendly city that caters for the modern Chinese family's needs.

Although Tianjin eco-city is driven by housing development, the planners of the project also allocated industrial land-use in order to increase the self-sufficiency of the city and enable potential residents to work locally. Given the many new technological features and the great media coverage on the development that emphasises on the collaboration between two governments, Tianjin eco-city attracted private investors including large property developers such as Shimao and Wantong. Since the Sino-Singaporean eco-city is still relatively young, it remains to be seen whether it will fulfil the high financial expectations from all parties involved. Nevertheless it is already possible to state

that the Tianjin eco-city has succeeded in initiating a new type of development approach that otherwise would not have been possible to create by any other market actors.

5.3 Summary

In China planning has become a key mechanism for shaping the market according to the needs of the state and the general public. The fierce competition between cities has resulted in the over-expansion of cities that has threatened to destroy the environment and the surplus production of certain industries. In order to better coordinate the development of the market, planning was used to create a joint vision for the Yangtze River Delta region. Whilst the strategy limited certain market actions such as expanding into ecologically fragile areas, it also fosters the overall competitiveness of the region by encouraging industrial upgrades and the allocation of new land for developing new industrial sectors. Although regulatory planning mechanisms are often regarded as obstacles to growth, in the Chinese case it has proven to be indispensable for the long-term economic success of China. Without the market-shaping forces created by regional plans, China would not have been able to regulate the uncoordinated competition between municipalities that would have resulted in far greater costs than any short-term profits. In this sense, the value of planning is its ability to prevent or at least significantly reduce the costs of an unregulated market.

In addition to reducing costs, the market-shaping mechanism of planning also allows the government to open up new market development directions that would otherwise be left untouched by other market actors. The Chinese eco-city initiative is a useful case to illustrate the ability of planning to take the lead in tackling environmental challenges whilst trying to meet the rising housing needs of the population. It is important to note that the Chinese eco-city development trend also bears many unsuccessful cases such as Dongtan eco-city and that substantial improvements are needed to ensure that future eco-city developments stay true to its concept whilst staying practically feasible. However, what is important here is not the fact that some eco-cities have failed but rather that the planning mechanism can be utilised to open up new market trends as well as to instil trust in to other market actors through actively promoting the advantages of these places.

6. The role of planning in regulating markets in China

Planning can play a very vital role in compelling, managing and eradicating certain activities and thus limiting the scope for autonomous actions of certain actors (Adams and Watkins 2014). Before embarking on to the Chinese case it is useful to quickly summarise some of the key points regarding the role of planning in regulating markets. The rationale of regulatory planning is often to ensure that minimum standards of developments are met and to create reliable cornerstones for market actors to act within. Regulations can take on different forms that align more with the political context of respective countries. In Britain for instance, a more flexible and discretionary regulatory system is preferred where developments can be judged case by case and decision may be dependent on current priorities. In contrast North American and Western European countries and increasingly also in China, pre-defined regulations are more common place, as comprehensive standards and zoning regulations help create more certainty and are thus preferred by the respective governments and other stakeholders.

With regards to the relationship between regulatory planning practices and other market actors (especially from the private sector), planning regulations are often portrayed as time consuming and costly (Allmendinger and Ball, 2006; Allmendinger, 2010; Ball 2010). Interestingly, whilst there is an impressive amount of studies dedicated to researching the cost of regulatory processes, there is considerably less attention placed upon the potential benefits of planning regulations that restrict

certain activities. However, as Adams and Watkins (2014:36) have pointed out, the benefits of regulations can make a substantial contribution in economic terms such as ensuring that potential problems can be spotted and resolved earlier and thus resulting in fewer costs. It is in this same vein of arguments where the Chinese case may be useful in providing some evidence of the benefits of regulatory planning practices. Moreover, the Chinese experience here may also illustrate the negative consequences if there are no regulations in place to limit certain activities.

6.1 Regulating growth in China through planning

Although the role of planning was largely geared towards economic growth since the post reform era in China, in recent years the central government has introduced several policy interventions to limit urban developments in certain areas. This action by the central government may seem contradictory to the objective of economic growth, however it becomes less surprising considering some of the negative externalities that rampant urban expansions initiated by some cities have created. Earlier it was mentioned that many development powers were devolved to city governments and coupled with the tax sharing system, which allowed city governments to retain a part of the revenue gained from land sales, and effectively enabled city planning authorities to actively take part in market activities. However, this unrestricted power for city governments to develop led to massive urban expansions and uncontrolled urban sprawl, which were threatening to destroy the fragile ecological system.

Another significant but unforeseen externality of Chinese urban entrepreneurialism was the increasingly fiercer competition for investments and growth between cities that were not only detrimental to individual cities but also had serious economic and social implications for the respective regions they were situated in. The reason why a more national level regulation was needed to cope with these surging problems was because regional governments were only able to coordinate developments within their constitutional boundaries, which in this case are the provinces. However, the increasingly fierce intercity competition often involved cities, situated in different provinces and thus governance at the regional level was not very effective in dealing with them. In a sense, the competition for urban growth and attracting investments has been elevated from intercity to an interregional scale. As a response, under the Hu Jintao and Wen Jiabao government, two key national plans were initiated following the back then newly established concept of 'scientific approach to development'.

The Ministry of Housing and Urban-Rural Development (thereafter MOHURD) was the earliest ministry to produce the National Urban System Plan (2005-2020), which is the first national level urbanisation and spatial development plan (Li and Wu, 2012). The national plan identified major cities and urban clusters as well as determined areas that had the potential for further developments (Li and Wu 2012: 95). It further establishes different urbanisation strategies, which included the objective to counter over-concentration along coastal areas but also considered the conservation of natural resources and ecological conditions through guidelines of regional spatial developments. Another important aspect of the National Urban System Plan is to coordinate the development of cross-regional infrastructure and also stressing the importance of city-regions. Despite the elaborate strategies to manage growth in a more holistic way, the influence of the National Urban System Plan was extremely limited as it lacked an implementation mechanism and also due to China's complex governance dynamics where MOHURD did not have the jurisdiction to apply its planning strategy. Consequently the urban system plan remains as a non-statutory guideline since its inception (for more details see Wu 2015).

The second and arguably most effective plan at the national level is the National Main Functional Area Plan produced by the National Development and Reform Commission (NDRC). The plan was

introduced in 2005 lasting until 2020 and has the objective to coordinate developments at the regional scale in order to firstly control undesirable development particularly in ecologically fragile locations (Wu 2015). The second objective is to reduce unnecessary intercity competitions and instead focus resources and develop a spatial strategy to meet growth targets in a more coherent manner. The plan itself is categorised into four main functional areas including a 'prioritised development area, optimised development area, constrained development area and forbidden development area' (Fan et al., 2012; Li and Wu, 2012). Apart from the forbidden develop area, which is aligned according to the boundary of natural reservation areas, the remaining three functional areas are delineated according to spatial units equivalent to a jurisdiction area.

In theory, the main functional areas also represent specific policy target areas that can be directly applied to the jurisdiction allocated to one of the categories. Each main functional area incorporates a specific set of policies and priorities and as the title suggests, forbidden development areas encompass territories where the ecology has been considered as particularly fragile and are thus strictly forbidden from being developed. The 'prioritised development area' addresses predominantly areas that require further economic growth as the policies in this category prioritises industrialisation and urban development by developing new industrial sectors and growth poles. The 'optimised development area' in turn is more targeted at areas that are already sufficiently industrialised but would require the upgrading of industrial structure in order to shift away for their currently resource intensive approach. With respect to the 'constrained development area', the policy priority here is to regulate the scale and place of developments in accordance to the territory's ecological capacity.

Similar to the National Urban System plan, the National Main Functional Area plan also lacked statutory status, however given that the NDRC was in charge of distributing financial resources and in setting up economic targets, the impact of their plan was significantly stronger. From the two national level plans it is possible to observe a shift of the government from a purely growth-based sentiment towards a more coordinated development approach that adopts both growth policies but also regulations that reduce certain market activities in order to reduce negative externalities.

6.2 Inter-regional and regional strategic plans

In addition to regulatory procedures at the national level, the gradual shift towards a scientific development approach also prompted the NDRC and MOHURD as well as provincial authorities to develop inter-regional and regional strategic plans. Compared to local strategic plans initiated by city governments, which were based on place promotion and urban entrepreneurialism, the objective of these plans at the regional scale were to reintroduce a more coordinated order of spatial development in light of intercity competition. Two notable examples of such regional scale strategic plans are the inter-regional Yangtze River Delta Regional Plan and the regional scale Pearl River Delta Urban Cluster Coordination Plan.

Pearl River Delta Urban Cluster Coordination Plan

The Pearl River Delta has always been recognized for its highly export oriented industrial development, which is often driven by local bottom up initiatives (Sit and Yang, 1997). The strong emphasis of industrial developments and export based GDP growth has resulted in a dispersed and uncontrolled pattern of regional development that could hardly be contained by earlier attempts of the provincial government (Xu and Yeh, 2005). The Pearl River Delta Urban Cluster Coordination plan was jointly produced by the Guangdong provincial government and the MOHURD (Xu, 2008). In contrast to earlier attempts, the Urban Cluster Coordination plan marks the first top-down and regulation based approach to enable a more coordinated order of spatial development in light of

fierce intercity competition. This regulation-based approach is reflected in the format of the plan, which moves beyond the presentation of land uses and instead comprises of a 10 chaptered document, and in the plan's subtitle – "Towards a Great Global Metropolitan Region" (Xu 2008).

The plan gives special importance to the development of general guidance, for instance through the designation of key development areas. The plan also lists compulsory requirements such as the classification of green belt preservation as well as transport corridors. Furthermore, the policy of spatial governance that this plan has adopted aims to curb unsuitable activities and uses as well as to support municipalities to achieve better coordination. The Guangdong provincial government and MOHURD achieved this objective by developing systems of control, governance, coordination and guidance (Xu 2008). The key instruments include four types of mechanisms: green line and red line, index and targets, joint meetings between mayors, and guidance over lower tier spatial plans.

More importantly in order to ensure that the guidance mechanism avoids being restrictive, additional policy guidance for lower tier plans is also provided. Another novelty of the Pearl River Delta plan is that it also endeavours to foster the competitiveness of the entire region as opposed to the competitiveness of single cities. By proposing a spatial structure that comprises of one core area, three development belts and five development axes, the authorities aim to steer industrial developments into particular areas instead of simply letting them sprawl. The Pearl River Delta plan can be considered an important case study that reflects the central government's effort to reduce rampant urbanisation and urban sprawl through its emphasis on spatial order and coordinated growth.

6.3 Summary

This section has tried to support and elaborate on the arguments by Adams and Watkins (2014) by referring to the Chinese case of using planning as a way of regulating markets. Regulations can take on various forms depending on the context and varies considerably in its design and the extent of its influence.

What has happened in China is useful to illustrate how a lack of regulatory processes can result in negative externalities including the gradual destruction of the ecology as well as issues of overcapacity and inter-city and inter-regional competition. Planning in this case has become a powerful tool of the central and regional governments to stop urban sprawl and uncontrolled industrial expansions. Through the production of national and regional spatial strategies, which do not simply strive for economic growth but require this to be achieved in a coordinated manner, China has managed to more or less contain unnecessary urban sprawl and counteract the country's ecological degradation.

Furthermore, the Chinese experience also illustrates the suggestion by Adams and Watkins (2014) that processes of regulating and shaping markets are deeply intertwined and that its outcomes can hardly be measured independently of each other. Although the national and regional plans have introduced regulatory measures to limit the actions of individual cities in order for the plans to be implemented effectively, incentives were also offered in the form of financial support for projects that reflect the preferences of the central government. Of course, there are still many problems to be solved and China is by no means a successful model to be replicated however, the experience from China may provide an alternative interpretation of planning as a necessary measure to curb negative externalities of the market due to the actions of certain market actors.

7. Building planning capacity in China

7.1 Changing the mindset of planners – planning as an agent of growth

Capacity building increases each actor's ability to utilise their own opportunity space to the full extent and negotiate the best outcomes with other market actors. With regards to building the capacity of planners, the main focus should be placed upon changing the mindset of planners working in the public sector (Adams and Watkins 2014:43). Many planners in the UK are already actors within the market who are deeply involved and should therefore confidently and actively take part in its actions. In this regard, Chinese planners are highly market aware and take on a very proactive role in encouraging economic development. The mindset of planning in China is based on visionary planning for the future. Instead of interpolating 'present condition into the future' the aim of planning is to create the vision of 'how to become a city by doing the right things at the right time' (Wu 2015:195).

In practice, the Chinese plan-making method strongly emphasises on taking actions rather than analysing the present conditions and finding problems. The best example to illustrate this approach is perhaps the action plan, which was proposed by the chairman of a private planning practice and has since been adopted by many municipal authorities. The action plan advocates practical planning targets instead of a grand vision and then identifies the most suited pathway to achieve these deliverables. For instance, whilst allocating green space is a typical land-use planning approach, by following the principles of the action plan, the Guangdong province proposed to build a greenway, which is a much more proactive approach towards planning. Planning in China has thus moved on from an interventionist role during the socialist era and transitioned into an entrepreneurial approach in order to cope with emerging market forces.

This firm confidence that planning can be a leading force in fostering economic growth also stems from the political support of planning at the highest level. When the new party leader Xi Jinping took on his position, the first place he visited for his field inspection was the Beijing Planning Exhibition hall, which indicates the importance of planning in China. In fact, planning is a very effective way to showcase the success of political leaders, which is why in most of larger Chinese cities, such as Shanghai and Beijing, it is possible to find Planning Exhibition halls in prime locations. Such public display of urban plans and strategic visions for the city further strengthens the confidence of planners and reaffirms their position in the entire process of creating prosperity.

7.2 Creating market-rooted networks and extending the capacity of planning

In order to fully exploit the potential of planners it is necessary to enhance the social networks of planners with other market actors, such as other professionals, private developers in order to firstly exchange knowledge on how to create better places and secondly to establish a relationship of trust (Adams and Watkins 2014). Creating social networks with other market actors and improving the sense of trust particularly between the public and private sector is crucial for the successful delivery of developments. One way of increasing the trust relationship between different actors is to include other stakeholders in the plan-making process but also to break down existing stereotypical views towards planners and the profession of planning.

With regards to creating diverse social networks, planners in China are well connected with other market actors. Whilst during the socialist era planning was an entirely internal activity carried out by the governmental planning institute, consultation with international practices now plays a significant part of the plan-making process. This is true especially for large-scale projects where as mentioned before design contests are a preferred choice of plan-making. A key benefit of involving international

experts and planning firms is the possibility to directly learn from foreign best practices and to borrow these concepts and implement them into the Chinese case. The technique of inter-referencing development concepts such as 'eco-cities' from other countries has become an important tool for mobilising market interest and facilitating developments. Chinese planners are thus very keen to involve international consultants as the recognition of international organisations in the form of endorsements or awards for best practices is often the most effective way to place the local development into the international limelight and to gain recognition from the central government. In this sense, awards and endorsements of urban projects play a similar role as credit ratings since they can facilitate trust and confidence regarding the success of the development. For example the village of Yaxi, which is located near Nanjing, is the first to join the international slow-city movement (*cittaslow*) and takes pride in being the first 'slow town in China'. However, Yaxi also benefitted from the official endorsement as the first slow-town in economic terms such as attracting more private investments and acknowledgements by the central government (Wu 2015:200).

In addition to international social networks, urban planners are also well connected with domestic market actors. For instance, planning departments work in close collaboration with the Urban Planning Society of China (UPSC), which organises events to help municipalities to find the most suitable foreign consultancy. In this sense, using its specific social networks the UPSC offers a formal platform for local governments to exchange knowledge with international firms and acts as a quality controller as well. External consultancies for plan making have now become a widespread practice in China but is not limited to international firms, which are mostly invited for large-scale projects. For most urban development projects, Chinese planning departments cooperate with domestic consultancies and most importantly universities and research institutions. There is a tradition of including university planning departments as the expertise of scholars is highly valued. For instance, for the creation of the Yangtze River Delta Regional Plan, the NDRC invited researchers from the Nanjing Institute of Geography and Limnology of the Chinese Academy of Science. Another example would be National Urban System Plan, which was prepared by the Chinese Academy of Urban Planning Design and was strongly influenced by geographical studies. The plan tried to move beyond the sole focus on economic growth and instead adopted a more holistic approach that tried to direct more attention to the natural environment and socio-economic conditions. The inclusion of scholars and planning experts into the process of plan making also enhances the credibility of the development and thus also acts as a place promotion method.

7.3 Summary

Amongst many other aspects building the capacity of planning can be understood as improving the mindsets of public planners and ensuring that planning professionals are well connected to a broad social network of other market actors. In the Chinese context, planning is widely considered as a tool that can facilitate growth and thus enjoys great popularity amongst political leaders. This firm confidence placed in the planning mechanism as growth generator is largely due to the proactive interpretation of the role of planning. The emphasis is for planners to take on the leading role in facilitating developments, by proposing visions for the future of Chinese cities and then to develop achievable targets through action plans. In order to increase the capacity of planning, Chinese planning departments often collaborate with various market actors during the plan-making process. For instance, the inclusion of international consultancies means that Chinese developments can learn from foreign best practice but more importantly it would help a local project gain global recognition. This in turn increases the development's credibility and attracts the attention of investors and the central government's approval and support. In addition to international firms, Chinese universities also play a central role in assisting planners to produce a more holistic development plan that tries to take into account environmental and social issues.

Part III: The economic impact of planning

8. The impact of planning on China's development and economic growth

Throughout the report so far, each section emphasised on one specific dimension of planning and its contribution towards realising economic growth. The purpose of this section is to illustrate the various fields where planning has had a lasting impact in terms of creating prosperity and development. As Adams and Watkins (2014) have stressed, planning has often been thought of as an inhibitor of growth and is thus more frequently associated with economic *costs* rather than *value*. In addition, the authors argue that most measurements of the worth of planning may be over simplistic and does not fully appreciate the full benefits of planning. Consequently the intention of this section is to present a more pluralistic approach towards measuring the value of planning in China and try to move beyond using monetary terms. Although the objective of planning in China is very clearly geared towards economic growth, the extent of its impact is much more than GDP increase. It is partly due to the pro-growth planning approach of the planning system that China has experienced its fastest urbanisation rate. Clearly, the increase of investments in developments and the resulting rise in housing prices only partly reflect the important role planning has been playing in development of Chinese cities. Instead, this section will look at some of the key areas that planning has had a significant impact including the reduction of urban rural inequality, housing provision (new towns) and planning for innovation and the housing market.

8.1 Planning for housing and employment – New town developments in China

Although housing and employment provision is considered a core task of planning, especially residential developments have become less self-evident in many industrialised countries such as Britain where housing provision by the state has increasingly become scarce and instead is reliant on the private market (Ball, 2013; Forrest and Murie, 2014). Rather than initiating housing developments, planning in Britain is mainly concerned with coordinating developments proposed by the private market and to negotiate the *planning gain* for the public (Ball, 2011; Hall and Tewdwr-Jones, 2010).

In contrast, planning in China has always been associated with creating new developments whereas the role of coordination (of land-use disputes for instance) is secondary or even limited (Wu 2015). This growth-oriented nature of planning is also evident in the provision of housing in recent years. In order to cope with rapid urban population growth the most recent approach of large-scale housing provision by the state has been the creation of new towns (Shen and Wu, 2013; Wu and Phelps, 2011; Shen and Wu, 2012a). Especially the fast suburbanisation rate of first tier cities such as Shanghai, Beijing and Guangzhou has prompted the municipal governments to plan for new towns. The underlying rationale of the municipal governments is very clear. Instead of allowing the private market to have free rein over the locations and amount of residential developments that may result in negative externalities for the public, it would be more beneficial to coordinate the development of residential areas and the provision of public services through new town development plans. However, the emphasis of new town developments does not lie in constraining land uses but instead it aims to use the plan as an interface between the government and the market in order to facilitate the project conceptualisation as well as strengthen the state's role as the primary developer (Wu 2015:165). The next section will briefly discuss two typical new town developments in order to illustrate the role of planning in facilitating new residential developments in Chinese cities.

Songjiang new town in Shanghai

New towns are a particularly prominent feature of the Shanghai masterplan (1999-2020) which proposed nine new town developments, each with a population size of 200,000 to 400,000 (Shen and Wu, 2012b). The concept of new towns was not only to provide housing for the growing population but also to combine them with industrial uses and allow new towns to become more or less independent cities rather than housing extensions of the core city (ibid). In order to encourage new town developments, much of the power to develop new town plans has been devolved from the municipal government of Shanghai to its district governments.

Located about 40 kilometres away from the city centre of Shanghai, Songjiang is one of new towns in Shanghai. It ranks at the top in terms of population growth and in 2010 Songjiang counted almost 684,000 residents amongst which nearly 70 per cent are migrant residents. Songjiang was constructed on the site of an existing satellite town and, since the 2000s, it has been further extended with a university town as well as clusters of low-rise villas and high-rise apartment buildings. The flagship development of Songjiang is Thames Town, a British themed villas neighbourhood that aimed to promote Songjiang as the ideal residential neighbourhood in Shanghai. However, Songjiang is not purely residential based. From the outset of the plan, the government intended to create Songjiang as a comprehensive city designed for high-standard residential living combined with a strong presence of the manufacturing industries as well as the tertiary sector in order to provide employment to its diverse population (Shen and Wu, 2012b). The population of Songjiang is very heterogeneous and comprises of affluent residents who live in the low-rise villa residences; white-collar families who were attracted by the high-rise apartment buildings located near the new metro line and finally also a large share of rural migrants who relocated to Songjiang for its abundant industrial sector employment positions (Shen and Wu, 2013).

A partnership between the district government of Songjiang and three municipal development corporations was established in the form of the Songjiang development corporation in order to develop Songjiang New Town. Whilst the district government provided the necessary land for development, the municipal level development corporation funded the actual construction with 100 million Yuan (Wu 2015). Similar to the project in Zhengdong, a design competition was also launched in Songjiang to determine the best master plan. The British firm Atkins was ultimately chosen as the winner and developed a plan that envisioned a cosmopolitan lifestyle and for the first time in China also emphasised on an aesthetic landscape (Shen and Wu 2012b) (Figure 3).



Figure 3. The cosmopolitan landscape in Songjiang new town. Here the Thames Town shows a British market town style. Photo by Fulong Wu.

The Songjiang development corporation was in charge of the carrying out the initial plan and development tasks including detailed design, land acquisition as well as the construction of infrastructure. For the construction of the actual residential units as well as the town centre and commercial areas, it was private companies that provided both the financial capital and carried out the development. The development corporation itself was responsible for constructing other local facilities including schools, supermarkets, an art gallery, an exhibition centre and a sports centre. Since its completion, the sale of properties was very successful due to Songjiang's marketing strategies and the provision of sufficient infrastructure (such as the extended metro line). Both the local government and the private developers gained substantial profits from the Songjiang new town project (Shen and Wu, 2012a). Songjiang caters to a very broad spectrum of the population including rural migrants, white-collar families as well as affluent households (Shen and Wu 2013).

The low carbon new town of Wuxi Taihu

The Wuxi Taihu new town is another example to illustrate the value of planning in creating new homes and employment opportunities and thus facilitate local development and growth. The particularly interesting aspect of Wuxi Taihu new town is that it has effectively used the requirement of environmentally sustainable development to its own advantage. In 2007, an area of 150 square kilometres south of Wuxi was designed as new town with the intention of building an area that combines various functions including government, office, finance and business, culture and entertainment, science and research and finally residential areas (Wu 2015).

Similar to the rationale of Songjiang, the government of Wuxi hoped to construct a self-sufficient town where its residents can find employment locally. Officially the target was set at 800,000

residents and 500,000 jobs with a high density CBD at its centre (Figure 4). Like most other new towns in China, the new town in Wuxi Taihu had a considerably higher density compared to new towns in Britain. There were two key actions that the newly founded Wuxi New District government took, which allowed Wuxi Taihu new town to be more successful than many other new town developments.



Figure 4. The central business district of Wuxi Taihu new town.

Firstly, the Wuxi government appointed Arup to produce an eco-city plan for Wuxi Taihu with the intention of garnering the support of MOHURD, which at that time started to promote eco-city and low carbon developments. The second reason why Wuxi Taihu managed to stand out from its peers is the commissioning of a Swedish architectural firm to produce a ‘Sino-Swedish low carbon eco-city conceptual plan’. The idea is to produce a conceptual plan that would achieve similar outcomes as the Hammarby Sjöstad in Stockholm in terms of its ecological performance but also economic success. Despite the seemingly large scale the Sino-Swedish eco-city title may suggest, in reality the conceptual plan only covered an area of 2.4 square kilometres of the vast 150 square kilometres that would make up the entire Wuxi Taihu new town. The population of the low carbon eco-city would also only amount to 20,000 residents compared to the total of 800,000 people. Nonetheless, the considerably smaller scale of the Wuxi low carbon eco-city also allowed the pilot area to be designed in much more detail. Another innovative strength of the low-carbon eco-city was that the new town government managed to include a list of eco-city development targets as statutory requirements, which in effect created a concrete index of implementable targets such as conventional plot ratio or eco-efficient indicators.

These two measures adopted by the Wuxi New District government managed to gain the support of MOHURD, which designated the Wuxi Taihu new town as a ‘national demonstration zone of low-carbon eco-city’ (Wu 2015). The designation in effect allowed the Wuxi Taihu new town project to

bypass several administrative ranks and directly receive the support of the national government as well as attracting international attention. Furthermore, compared to some large and costly eco-city schemes such as Dongtan, the introduction of green building technologies to the pilot area would only increase the building cost by 10 to 20 per cent and thus not impede on the economic viability of the project. More importantly the area managed to attract numerous industries including large film studios to move to Wuxi Taihu and thus solving the employment problem of many of its residents (Figure 5). The Wuxi Taihu new town project is an exemplar of how it is possible to create values such as housing developments and new employment by adopting a pro-growth planning approach.



Figure 5. The film studio based in Wuxi Taihu new town. Photo by Fulong Wu.

8.2 Planning for economic development: Zhangjiang High-tech Park

The previous section tried to highlight the role of planning in creating homes and employment. The purpose of this section is to elaborate on the positive impact of planning in fostering innovation in China. Innovation has increasingly become a policy focus of the Chinese government, which is seeking to upgrade its labour intensive and unsustainable manufacturing industry (Zhang et al., 2011). The policy of 'indigenous innovation', which emphasised research and development in order to produce innovation in the local economy, was introduced as part of this new emphasis on innovation rather than imitation from China and attracted numerous multinational companies to invest in science and technology in China (Zhang and Wu, 2012). The Zhangjiang High-tech Park is located in Pudong New District in Shanghai and was established in 1992 (Figure 6). Zhangjiang specialises in biomedical research with several biotech research institutes and plays an important role as an entry location for global multinational pharmaceutical and biotechnology companies who intend to relocate their Research and Design base to China (Zhang and Wu 2012). Over the years, Zhangjiang has evolved into a major player in the fields of biomedical innovation, which is also

benefitting the wider Yangtze River Delta Region. In 2006, the biomedical cluster in Zhangjiang counted 240 companies, over 15,000 employees, 110 granted patents as well as 6.42 billion Yuan output value (Zhang and Wu 2012).



Figure 6. The Pudong new district of Shanghai, seen from the Bund. Photo by Fulong Wu.

The growth of Zhangjiang High-tech Park is closely associated with the proactive role of the municipal government in trying to create a high-tech cluster in Shanghai. Planning and land development were one of the key mechanisms that had lead to the development of Zhangjiang High-tech Park (Figure 7). From the very beginning, the development of Zhangjiang High-tech Park was considered a part of the urban development strategy of the Shanghai municipality. Much of the public funding that was invested into the development of Zhangjiang came from land development. By setting up the Zhangjiang Development Corporation, the local municipality was able to take on loans from the capital market using the land as collateral in order to develop the necessary infrastructure of the high-tech park. Once the construction of the factory and office buildings have been completed, the corporation was then able to resell the land for a much higher price in order to pay back the loans. With the profits gained from the sales of properties, the municipality subsequently funded several development within the Zhangjiang High-tech Park, such as the Zhangjiang IC District B, a new tech innovation zone, and the central area of R&D office buildings, for the purpose of attracting biotech companies (Zhang, 2015).



Figure 7. The incubator of Zhangjiang High-tech Park. Photo by Fulong Wu.

In addition, from the rising revenues from land development, the Shanghai government also invested heavily into venture capital high-tech companies located within the high-tech park. Thus, the Shanghai municipality was able to develop Zhangjiang High-tech Park with virtually no initial capital. This model of land development has already been mentioned in the Kunshan case study and is a common and widely adopted method for local governments to initiate their land development. However, land sale was not the only way planning was used to enhance the growth of Zhangjiang High-tech Park. The 'Focusing on Zhangjiang' policy allowed the local government to treat Zhangjiang as a special cluster and concentrate its resources on its growth. This included a series of preferential tax measures and in addition the policy, granted special autonomy to the governance of Zhangjiang High-tech Park, thus streamlining bureaucratic complexities and reducing administrative hurdles. Moreover, the designation of a high-tech zone also significantly increased the competitiveness of all companies located in Zhangjiang. For instance, the recent facilities of on-site provision custom clearance facilities significantly increased the efficiency. Furthermore, residential units are also provided in order to accommodate the needs of the staff.

Although Shanghai has yet to achieve the status of a mega 'pharma-biotech' centre in the world (Zhang 2015), the speed of developing biotech R&D capacities and particularly the concentration of biotech firms in Zhangjiang High-Tech Park has been exceptional. Planning in this sense has played an indispensable role as providing the basic framework for the development of Zhangjiang and fostering the capacity of the high-tech park is closely associated with the urban development strategy of the municipality (Zhang and Wu 2012). The even more remarkable implication in this case however, is that by using planning as a tool for growth, Zhangjiang has also helped Shanghai and the wider region of the Yangtze River Delta to access the global chain of biomedical research as well as development, thus attracting numerous foreign investors and producing local enterprises. The impact of planning in this sense is much more far-reaching than simply the creation of GDP growth and the increase in employment numbers. In the long term, the planning of Zhangjiang High-tech Park and other high-tech zones in China has contributed to the creation of innovation, thus reducing China's dependence on labour intensive as well as ecologically unsustainable industries.

8.3 Planning and the Chinese housing market

So far this report has largely concentrated on the wider economic and social benefits of planning in China. Within the economic field, many studies have dedicated their attention towards understanding the relationship between planning and the housing market (Adams and Watkins 2014; Adams and Watkins, 2008; Bramley, 2013; White and Allmendinger, 2003). With regards to the impact of planning on the housing market, research findings differ according to the political economic context. Some research in the UK indicates that planning regulations may lead to negative impacts on the housing market (for more information see Adams and Watkins 2014:52).. However, it is crucial to note that considerably more research is needed in order to better understand the impact of planning on the economic performance of the housing market. Research so far has been unable to interpret planning in its wider functions and the emphasis placed on measuring the cost side of planning far outweighs the consideration for the benefits of planning (Adams and Watkins 2014).

The Chinese case is quite different in this regard. City planning played a crucial role in opening up opportunities for the expansion of suburbs where large-scale residential developments occurred. Suburban expansions often involve the conversion of agricultural land to urban land and therefore need to gain formal approval first. The control over land conversion in China is implemented largely by another mechanism namely the allocation of land quota through a system established by the Ministry of Land and Resources (MLR). MLR prepares land use plans mainly for the protection of agricultural land, which bears some similarity to zoning and prohibits certain developments within specific boundaries. The protection, however, is achieved through a simple but effective mechanism of allocating a quota to local governments. The quota specifies the quantity of agricultural land that can be converted into the built-up areas. Although in theory the land use plan, land development quotas and urban master plans could all be regarded as part of the planning system, in reality only plans prepared under the system of the Ministry of Housing and Urban-Rural Development (MoHURD) are defined as official planning legislations. The reason is because land use quota is allocated without much input of local authorities. The primary purpose of the quota is to constrain rampant development and to defend the national interest of maintaining a total of 1.8 billion *mu* (15 *mu* = 1 hectare) agricultural land.

However, the national interest of protecting agricultural land may be more peripheral to municipalities, which are more concerned about the housing market. The dynamics of the housing market have become part of Chinese land-centred development in recent years. The inflation of Chinese house price is largely driven by capital liquidity through the significant supply of money. The monetary supply has been used as an instrument to fuel growth and cushion off the impact of the global financial crisis. In 2008, the Chinese central government issued a four trillion Yuan stimulus package, which led to the inflow of capital into the property market. To protect the capital value, households invest in properties for asset appreciation. In this sense, the constraint of land supply through land quota also contributed to inflation of property prices. Planning, however, is not part of this constraint and instead works in the opposite direction. The local government often used the planning process to justify the need for urban expansion and hence to receive more land quotas from the central government. In China, the constraint on land for housing development is largely imposed in a top down manner rather than as an outcome of planning delays or local resistance. Municipalities however, rely on the booming of the real estate market to help boost land sales and provided crucial land revenue to local governments.

8.4 Summary

The impact of planning in China is wide reaching and cannot simply be understood as higher GDP growth. More importantly, whilst planning is sometimes being associated with economic costs for the general public and the government, this report has emphasised on the role of planning in facilitating development and economic *value*. Value in this sense has multiple dimensions. The cases of Wuxi Taihu new town and Songjiang both illustrate how planning and land development can be effectively utilised to create new housing catering to a wide spectrum of the population as well as offering employment opportunities in these new satellite towns. Planning in this sense has effectively turned the demand for housing into an impetus for development and economic growth. In addition to housing and employment, the case of Zhangjiang High-tech Park further shows that planning is an integral mechanism that facilitates the development of local innovation in China. By including the cluster of high-tech industries in Zhangjiang into the city's urban development plan and financing the construction of infrastructure through land development, Shanghai has been able to enter the world of biotech innovation as well as foster local biotech companies. The evidence from China's housing market also reveals that planning does not impose a constraint on the housing market but rather acts as a driving force for suburban residential developments. Since planning powers are highly decentralised, local authorities have the ability to use planning as a counterforce against centrally controlled land development quotas, which limits the supply of land for residential development. Planning in post-reform China has always been geared towards the improvement of the built environment.

9. Conclusion

The purpose of this report has been to explain the relationship between planning and economic value by referring to the Chinese experience. The report does not intend to provide any specific instructions on how to create value through planning as the Chinese case has its own political and economic uniqueness, which cannot be replicated to another context. Another reason why a direct policy transfer from China to other context would make little sense is because although planning in China has been widely adopted to facilitate economic value and urban development, Chinese planning is also far from perfect itself. Instead, the findings from China may be useful to provide a more positive interpretation of planning and help counter the common perception that planning is a passive obstacle to economic growth. Before starting to list the specific differences between the Chinese planning practice and the planning system in a liberal market such as the UK, it is worthwhile to note a key finding. Whilst planning in Britain is currently regarded as a passive control mechanism that slows down economic growth and hinders the private sector, Chinese private developers rely on the government and its planners to spearhead any large-scale developments since the involvement of the government significantly reduces risks. In this sense, planning is considered as the agent of economic growth and development in China, a mindset that has been deeply embedded into political leaders, planners as well as the wider public.

There are two reasons why planning has been closely aligned with economic value rather than cost in China. Firstly, the tax sharing system and the performance measurement of local political leaders have transformed land development into the primary mechanism for generating GDP growth. Municipalities have become urban entrepreneurs who try to promote their cities through strategic plans and the provision of cheaper land to incentivise investment from the private sector. Planning plays a proactive role in land supply. The value of planning is captured through the land bid market rather than 'planning gain' that relies on restricting land conversions. Planning processes are therefore closely associated with land development and infrastructure provision.

Secondly, this drive for land development to supplement the local economy has led to intercity competitions, which in turn necessitated the coordination of developments at a higher scale. Planning at the regional level in this case provides the development framework that regulates rampant land developments and tries to directly address issues of loss of rural land, endangerment of the ecology and oversupply of certain industries. However, instead of strengthening the regional tier of government, in China regulation of city expansion is realised through the introduction of strategic regional plans such as the Yangtze River Delta Regional Plan. Planning thus becomes an important tool for the central state to protect the economic growth of the nation whilst setting limits to the entrepreneurial market behaviours of the municipal governments.

Implications for policy

The report has three key recommendations. Firstly, extreme liberalisation of the planning system should be avoided, as this would weaken the ability of planners to shape the market and its actors. From the Chinese experience it can be seen that the fierce competition between cities required a strong regulatory mechanism to coordinate developments and reduce the potential cost of excessive urban expansions.

Secondly, instead of solely relying on private initiatives and waiting for the development proposals from private developers, planning should be given the financial support to lead new developments. Financial support in this case can be interpreted in multiple ways. In the Chinese context, planning also lacked financial capital to initiate developments however, the monopolistic land ownership of the state gives municipal authorities the ability to use land as a collateral to raise capital through the private market. In China a core reason why planning is capable of leading new developments and incentivise private investment is due to the availability of land as a resource at the disposal of the state.

Thirdly, the focus of planning should be shifted from physical design to economic development in order to cope with the demands of the market. In the Chinese context, planning has undergone this transformation and succeeded in adapting to the marketisation of the Chinese economy. Chinese planning in this case has managed to become more important and central to the governance system. Finally, it must be stressed that the Chinese planning system is *not* a successful model or best practice to be followed by other places. Rather, planning experiences in China reveal the negative consequences that arise in the absence of stronger regulatory capacities. Evidence from China reflects significant social and environmental values that a robust planning system can deliver. On the other hand, the rationale of growth-oriented planning in China also provides strong evidence that planning by its nature and a wide spectrum of associated activities can be supporting growth. Through transforming planning practices and enabling planning capacities, city planning can play a leading role in generating economic values.

References

- Adams D, Watkins C, 2008 *Greenfields, Brownfields and Housing Development* (John Wiley & Sons)
- Adams D, Watkins C, 2014 *The Value of Planning*, RTPI Research Report no.5, June 2014
- Allmendinger, P, 2010 *Transaction Costs, Planning and Housing Supply*, London: Royal Institution of Chartered Surveyors.
- Allmendinger, P, Ball, M, 2006 *Rethinking the Planning Regulation of Land and Property Markets*, London: Office of the Deputy Prime Minister.
- Barker, K, 2006a *Barker Review of Land Use Planning: Interim Report – Analysis*, London: HMSO
- Ball M, 2011, "Planning Delay and the Responsiveness of English Housing Supply" *Urban Studies* 48(2) 349–362.
- Ball P M, 2013 *Housing Policy and Economic Power: The Political Economy of Owner Occupation*. London: Routledge.
- Bell D, 2005, "The Emergence of Contemporary Masterplans: Property Markets and the Value of Urban Design" *Journal of Urban Design* 10(1) 81–110.
- Bramley G, 2013, "Housing market models and planning" *Town Planning Review* 84(1) 9–35
- Chen J, Guo F, Wu Y, 2011, "One decade of urban housing reform in China: Urban housing price dynamics and the role of migration and urbanization, 1995–2005" *Habitat International* 35(1) 1–8.
- Chien S-S, 2007, "Institutional innovations, asymmetric decentralization, and local economic development: a case study of Kunshan, in post-Mao China" *Environment and Planning C: Government and Policy* 25(2) 269–290.
- Chien S-S, 2008, "The Isomorphism of Local Development Policy: A Case Study of the Formation and Transformation of National Development Zones in Post-Mao Jiangsu, China" *Urban Studies* 45(2) 273–294.
- Fan J, Sun W, Yang Z, Fan P, Chen D, 2012, "Focusing on the major function-oriented zone: A new spatial planning approach and practice in China and its 12th Five-Year Plan" *Asia Pacific Viewpoint* 53(1) 86–96.
- Forrest R, Murie A, 2014 *Selling the Welfare State: The Privatisation of Public Housing*, Routledge: New York.
- Hall P, Tewdwr-Jones M, 2010 *Urban and Regional Planning*, Routledge: New York.
- Harvey, D, 1989 "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism" *Geografiska Annaler, Series B Human Geography* 71 (1) 3–17.
- Henneberry, J, McGough, T, Mouzakis, F, 2005 "Estimating the impact of planning on commercial property markets", pp. 105–123 in Adams, D, Watkins, C, White, M, (eds) *Planning, Public Policy and Property Markets*, Oxford: Blackwell.

Killian Pretty Review 2008 *Planning Applications: A Faster and More Responsive System*, Final Report, London: DCLG.

Li Y, Wu F, 2012, "The transformation of regional governance in China: The rescaling of statehood" *Progress in Planning* 78(2) 55-99.

Shen J, Wu F, 2012a, "Restless Urban Landscapes in China: A Case Study of Three Projects in Shanghai" *Journal of Urban Affairs* 34(3) 255-277.

Shen J, Wu F, 2012b, "The Development of Master-Planned Communities in Chinese Suburbs: A Case Study of Shanghai's Thames Town" *Urban Geography* 33(2) 183-203.

Shen J, Wu F, 2013, "Moving to the suburbs: demand-side driving forces of suburban growth in China" *Environment and Planning A* 45(8) 1823-1844.

Sit V F S, Yang C, 1997, "Foreign-investment-induced Exo-urbanisation in the Pearl River Delta, China" *Urban Studies* 34(4) 647-677.

Smith C J, 2008, "Monumentality in Urban Design: The Case of China" *Eurasian Geography and Economics* 49(3) 263-279.

Tao R, Su F, Liu M, Cao G, 2010, "Land Leasing and Local Public Finance in China's Regional Development: Evidence from Prefecture-level Cities" *Urban Studies* 47(10) 2217-2236.

Wei Y D, 2002, "Beyond the Sunan model: trajectory and underlying factors of development in Kunshan, China" *Environment and Planning A* 34(10) 1725-1747.

White M, Allmendinger P, 2003, "Land-use Planning and the Housing Market: A Comparative Review of the UK and the USA" *Urban Studies* 40(5-6) 953-972.

Wu F, 2012, "China's eco-cities" *Geoforum* 43(2) 169-171.

Wu F, 2015, *Planning for Growth: Urban and Regional Planning in China*, Routledge: London

Wu F, Phelps N A, 2011, "(Post)suburban development and state entrepreneurialism in Beijing's outer suburbs" *Environment and Planning A* 43(2) 410 - 430.

Xue C Q L, Wang Y, Tsai L, 2013, "Building new towns in China – A case study of Zhengdong New District" *Cities* 30 223-232.

Xu J, 2008, "Governing city-regions in China: Theoretical issues and perspectives for regional strategic planning" *The Town Planning Review* 79(2/3) 157-185.

Xu J, Yeh A G o., 2005, "City Repositioning and Competitiveness Building in Regional Development: New Development Strategies in Guangzhou, China" *International Journal of Urban and Regional Research* 29(2) 283-308.

Zhang F, 2015, "Building Biotech in Shanghai: A Perspective of Regional Innovation System" *European Planning Studies* 23(10) 1-17.

Zhang F, Cooke P, Wu F, 2011, "State-sponsored Research and Development: A Case Study of China's Biotechnology" *Regional Studies* 45(5) 575-595.



Zhang F, Wu F, 2012, “‘Fostering Indigenous Innovation Capacities’: The Development of Biotechnology in Shanghai’s Zhangjiang High-Tech Park” *Urban Geography* 33(5) 728–755.

Zhang J, Wu F, 2006, “China’s changing economic governance: Administrative annexation and the reorganization of local governments in the Yangtze River Delta” *Regional Studies* 40(1) 3–21.

**RTPI**

mediation of space · making of place

About the research

This report is based on research conducted for the RTPI by Professor Fulong Wu, Bartlett Professor of Planning, Dr Fangzhu Zhang, Lecturer in China Planning and Zheng Wang at University College London.

Further information

The report is available on the RTPI website at: www.rtpi.org.uk/planninginchina

About the RTPI

The Royal Town Planning Institute holds a unique position in relation to planning as a professional membership body, a charity and a learned institute. We have a responsibility to promote the research needs of spatial planning in the UK, Ireland and internationally.

More information on our research projects can be found on the RTPI website at: www.rtpi.org.uk/knowledge/research/

You are also welcome to email us at: research@rtpi.org.uk