

Transferable Lessons from the New Towns Movement in the UK

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摘要

在过去的 30 多年里中国新建了数以百计的新城镇，包括独立的城镇和城市新区、工业园区、经济开发区、以及卫星城等。尽管许多新城镇都面临着这样或那样的问题，仍然有大批的新城在按照同样的模式建设。本文以英国新城运动为例，通过对现有相关文献的分析发现对中国新城建设有益的经验教训。分析发现虽然英国新城最初的目标是为社会公众提供更好的生活质量并实现自给自足，但许多新城最终还是演变成了大型中心城市的卧城，而且遭遇了一系列的社会、经济、和环境问题。这些问题在很大程度上是由政策缺乏连续性以及实施过程与政策目标的背离所造成的。这为中国新城建设尤其是政策制定和实施机制提供了正反两方面的经验和教训。

关键词

英国新城运动，中国新城建设，经验和教训

Abstract

China has created hundreds of new towns both in the form of independent towns and as parts of existing cities in the forms of industrial parks, economic development zones, new urban districts, and satellite towns over the last three decades. Many are facing problems, albeit many more new towns are to come in the same way. This paper aims to draw on the lessons from the British New Towns to inform the ongoing Chinese new town practice. The analysis of the literature, following a thematic approach, finds that regardless of the initial goal set for the British New Towns to be places to provide better quality of life for the vast majority of people and to be self-sufficient, many of them have eventually become dormitory suburbs and encountered social, economic, and environmental problems. Such problems are seen as a result of discontinuity and inconsistency of policy and delivery. Both positive and negative lessons from the British New Towns movement are highly relevant and applicable to today's new towns practice in China, particularly in terms of policymaking and delivery mechanisms.

Keywords

China new town practice, British New Towns, transferable lessons,

Introduction

China has now come into a period of rapid urbanisation as a consequence of fast economic growth over the last three decades. Thousands of new towns were created both in the form of designated towns and as a part of existing cities in the forms of industrial parks, economic development zones, new urban districts, and satellite towns (Wu and Gaubatz, 2013). While the creation of these new towns may be necessary, the fundamental questions – developing new towns for whom and for what – seem to remain unanswered. This is argued to be the underlying factors leading to the problems facing many Chinese new towns (OECD, 2009a, b, Wu *et al.*, 2012, Zhang and Ning, 2012). As a late urbanised country in the world, China is not the pioneer in the development of large scale of new towns. Learning from elsewhere in the world therefore is argued to be one of the most efficient ways. The current paper is set to contribute to this purpose.

From a historical perspective, one may argue that the term ‘new town’ is meaningless since every town and city could be seen as a new town at the early stage of development. This may be true from a generic point of view, but what we meant about new town here is rather in its narrow sense referring to those that are purposively planned and systematically developed new settlements for social, economic, humanity, and environmental objectives. Drawing on this narrow definition, the recent new town movement may be traced back only to the English Garden City initiatives at the beginning of the twentieth century. Even though, there are still numerous new towns have been created throughout the world. Each has specific rationales and purposes and the development process was managed in significantly distinctive manners. This paper, as titled, will be limited to the British New Towns movement in the post-war period. It follows a thematic analysis approach to review the existing literature dealing with the UK government’s programme to develop 32 statutory New Towns under the 1946 and subsequent New Towns Acts. Echoing with the problems facing Chinese new towns today, themes were drawn on the following questions:

- What were the planning principles of the new towns?
- How were the development process governed?
- How were the new towns financed?
- How did the new towns create and foster social capital?
- Are the economies of the new towns successful?
- Are the new towns sustainable?

The remainder of this paper will discuss each of the above themes in turn.

The context

The post-war British New Towns Programme was perhaps the largest and first ever government-led urban development activities in British history (Alexander, 2009). Geographically, of the 32 New

Towns (Figure 1), 22 were in England, six in central Scotland, three in Northern Ireland, and two in Wales (Evans and Self, 1972). The planned population for the New Towns was about two million in total, but by the year of 1991 when the programme was abandoned, only 1.4 million people were reported to live in these places, though growth of some New Towns has continued since 1991 and exceeded two million in 2001 (Alexander, 2009). The New Towns Programme lasted 45 years from 1946 to 1991, but the designation ended with Central Lancashire in 1970. In such a long period, because of the change of economic climate and political thinking, the main purposes of the creation of new towns were different. Generally, they could be divided into three generations: the first was designated by the Labour government from 1946 to 1950; the second was designated by the Conservative from 1961 to 1964, and the third by the Labour again during the period from 1967 to 1970 (Table 1).

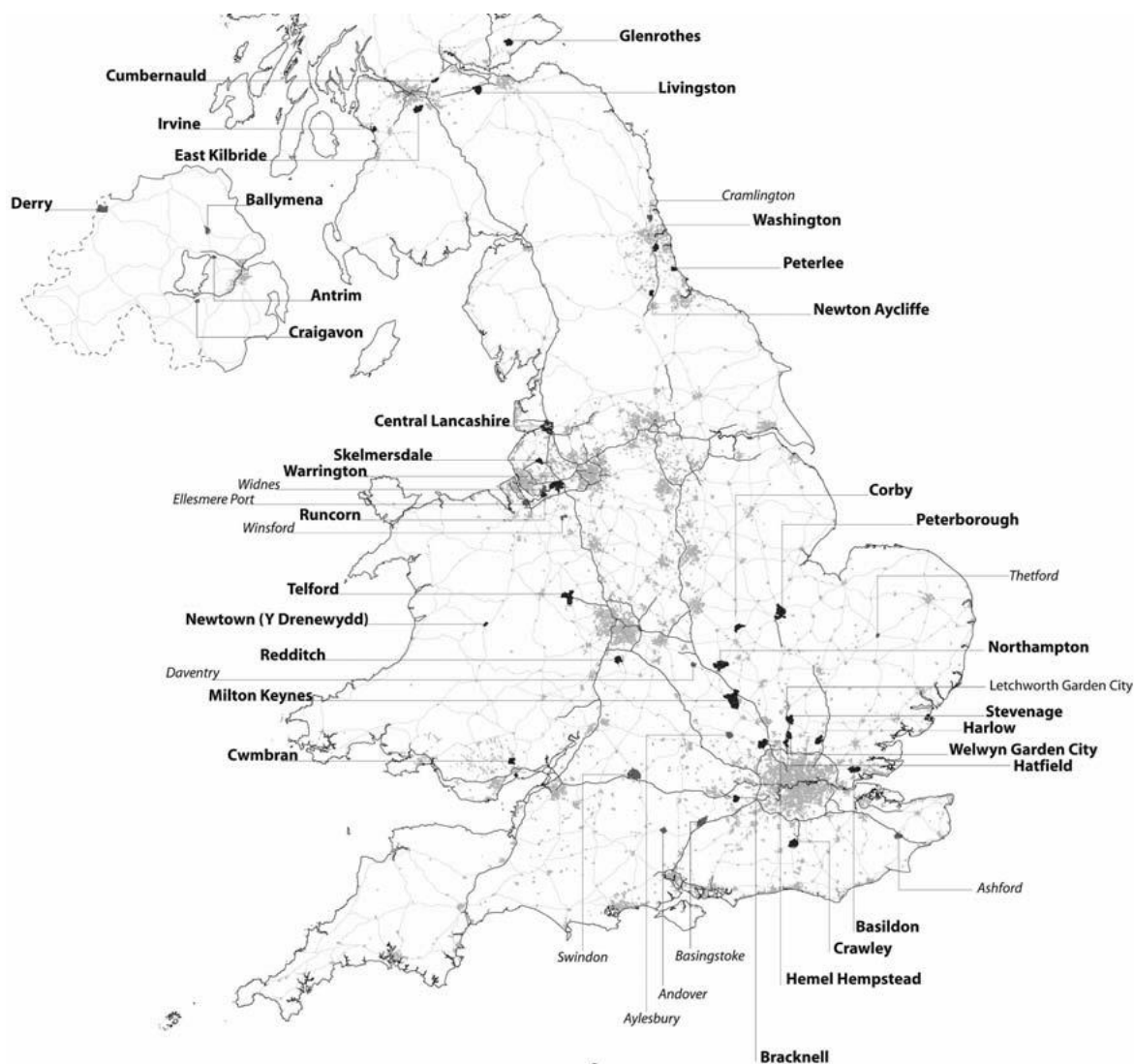


Figure 1. Location of British New Towns
Source: Adapted from Alexander, 2009

Table 1. Generation of New Towns

| Generation | Town | Location | Time of designation |
|-------------------|--------------------------|------------------|----------------------------|
| First | Stevenage | Hertfordshire | 11.11.1946 |
| | Crawley | Sussex | 09.01.1947 |
| | Hemel Hempstead | Hertfordshire | 04.02.1947 |
| | Harlow | Essex | 25.03.1947 |
| | Aycliffe | County Durham | 19.04.1947 |
| | Peterlee | County Durham | 10.03.1948 |
| | Welwyn Garden City | Hertfordshire | 20.05.1948 |
| | Hatfield, | Hertfordshire | 20.05.1948 |
| | Basildon | Essex | 04.01.1949 |
| | Bracknell | Berkshire | 17.06.1949 |
| | Corby | Northamptonshire | 01.04.1950 |
| | Cwmbran | Wales | 04.11.1949 |
| | East Kilbride | Scotland | 06.05.1947 |
| | Glenrothes | Scotland | 30.06.1948 |
| | Cumbernauld | Scotland | 09.12.1955 |
| Second | Skelmersdale | Lancashire | 09.10.1961 |
| | Telford | Shropshire | 16.01.1963 |
| | Redditch | Worcestershire | 10.04.1964 |
| | Runcorn | Cheshire | 10.04.1964 |
| | Washington | Tyne and Wear | 24.07.1964 |
| | Livingston | Scotland | 16.04.1962 |
| Third | Milton Keynes | Buckinghamshire | 23.01.1967 |
| | Peterborough | Cambridgeshire | 21.07.1967 |
| | Northampton | Northamptonshire | 14.02.1968 |
| | Warrington | Cheshire | 26.04.1968 |
| | Telford | Shropshire | 29.11.1968 |
| | Central Lancashire | Lancashire | 26.03.1970 |
| | Newtown | Wales | 18.12.1967 |
| | Irvine | Scotland | 09.11.1966 |
| | Stonehouse (never built) | Scotland | 17.07.1973 |
| | Craigavon | Northern Ireland | 26.07.1965 |
| Derry | Northern Ireland | 05.02.1969 | |

Source: Author compiled from various sources

The New Towns Programme was drawn first on the need for post-war reconstruction. Unlike many European countries that restored their bomb-ravaged areas to their previous scale and along their historic street patterns, Britain embraced a new vision for its cities that was inspired by the Garden City Movement in England and new construction in the USA, former USSR, and Scandinavia to

facilitate the overspill of population from congested metropolitan areas (Osborn and Whittick, 1963). New Towns were also designated to facilitate the large scale expansion of already large urban areas. For the majority of second and third generations of the New Towns, regional economic development objectives were prioritised, including brown field development in some cases. There was even one instance of a small New Town created for rural development purpose. Nevertheless, despite the geographical and temporal variations, there were apparent common features in the planning and development of these new towns (Alexander, 2009).

The British New Towns have long ceased to be regarded with the attention they deserved not only because the programme experimented a new model of large scale organised new settlements, but also inspired many similar urban development around the world. Even 60 years on, it still attracts a great deal of professional and academic attention. Although the development and policy context within which they were built is very different from today's China, the good practice in development which they pioneered and mistakes and problems they made of their day may be still relevant to the ongoing practice in China.

Planning and design principles

The first and the later generations of the British New Towns followed different approaches of urban planning and design. The principles of urban planning for the first generation of the New Towns were derived mainly from Ebenezer Howard's vision of the Garden City, while the second and the third generations were influenced mainly by the American approaches. For Howard, the Garden City was, by contrast to the overcrowding and deterioration of large cities of his time, a new model of settlement unifying town and country where new town housing should have an abundance of green space in public places planned on a concentric pattern with open spaces, public parks and six radial boulevards, extending from the centre. The Garden City would be a self-contained functional region (city region) clustering several garden cities as satellites of a central city of 50,000 people, linked by road, canal, and rail. The functions of each city should be pre-defined and the ideal scale for each satellite Garden City was envisaged to house 32,000 people on a site of 9,000 acres (Howard, 1902). In other words, a Garden City should be big enough to support a diverse economic base and various facilities but small enough for everyone to be within walking distance of the centre in one direction and open countryside in the other. The functional design would allow people to walk to work in clean airy factories and offices without tedious and time-consuming journeys and emphasis on social and demographic mix in the housing layouts. Last, but not least, the design of a Garden City would respect the existing topography and landscape (Howard and Osborn, 1965).

When the New Towns Programme was initiated, the Minister of Town and Country Planning in Clement Attlee's post-war Labour government, Lewis Silkin, wanted the New Towns to be places, where 'all classes of community can meet freely together on equal terms and enjoy common cultural and recreational facilities' (cited in Glancey, 2006). This was the idea drawing on the 'neighbourhood unit concept' formulated by American urbanist Clarence Perry in 1923, also inspired by Howard's Garden City. The 1946 New Towns Acts mandated that:

new communities were to be built by using zoned separation of residential housing estates from industrial estates, the formation of housing into 'neighbourhood units' built around a primary school and other local facilities, and the separation of these from each other by major roads and green spaces to form 'superblocks'. Vehicle movement and pedestrian movement

were to be segregated into separate networks, with people moving uninterrupted through underpasses and networks of footpaths, ensuring safe movement from neighbourhoods to secondary schools or town centres.

(Alexander, 2009, p. 74)

Attention was asked to be given to the emerging automobile, which was becoming a mainstay in urban living. Henry Wright's 'Six Planks for a Housing Platform' followed in designing Radburn, New Jersey, in 1929, were fully adopted:

- Plan simply, but comprehensively. Don't stop at the individual property line. Adjust paving, sidewalks, sewers and the like to the particular needs of the property dealt with - not to a conventional pattern. Arrange buildings and grounds so as to give sunlight, air and a tolerable outlook to even the smallest and cheapest house.
- Provide ample sites in the right places for community use: i.e., playgrounds, school gardens, schools, theatres, churches, public buildings and stores.
- Put factories and other industrial buildings where they can be used without wasteful transportation of goods or people.
- Cars must be parked and stored, deliveries made, waste collected - plan for such services with a minimum of danger, noise and confusion.
- Bring private and public land into relationship and plan buildings and groups of buildings with relation to each other. Develop collectively such services as will add to the comfort of the individual, at lower cost than is possible under individual operation.
- Arrange for the occupancy of houses on a fair basis of cost and service, including the cost of what needs to be done in organizing, building and maintaining the community.

(Gatti, 2008)

Clarence Stein, one of Radburn's architects, who was appointed the designing consultant by Stevenage Development Corporation, claimed that the six planks well demonstrated Aristotle's recommendation that a city should be built to give its inhabitants security and happiness. In his book 'Neighbourhood Plan Unit: Its Spread and Acceptance', James Dahir (1947) commented on these design principles were

social planning of an advanced order. It is manipulation of physical elements to induce and

encourage a social and human goal. It is a kind of planning which recognizes that the growing edge of civilization is in the human and not the mechanical direction, though the mechanical factors must be carefully aligned and allocated to support and advance the communal achievements and the social inventions of a free people of autonomous family life.

However, as mentioned above, the New Towns Programme was planned mainly to tackle the problems of housing shortage caused by the Second World War bombs and the overcrowding and pollution in major metropolitan areas. The economic piles planned dominantly for the New Towns were labour intensive manufacturing sector, which has been found to be most vulnerable in the changing economy (Bennett, 2005) (see below). New Towns houses were developed for public rental housing at lower costs and were built as terraces instead of detached or semi-detached villas, with garages grouped a short distance away from homes with poor surveillance, such a design was criticised as lack of identity (Ravetz, 2001).

With the rapid growth of private car ownership and sociocultural changes, the second and third generation of New Towns prioritised motor cars in the road design. Residential blocks were significantly enlarged, as seen, for example, in Milton Keynes, where the roads were designed in gridded system with each grid stretches as large as one square kilometres. The speed limits were set as the same as motorway which is 60-70 mph (95-110km/h). Residential densities were even lower than that of Garden City suggested by Howard (Edwards, 2001). As noted by Glancey (2006) :

the car here [Milton Keynes] is king, queen and all princes. Early plans for a futuristic monorail came to nothing. Trams, though, would be natural for such broad avenues, gridded street plans and widely-spread housing estates. They might not, however, take kindly to the town's infamous roundabouts.

The Director of the Neighbourhood Initiatives Foundation, Don Burrows, said the original design of some estates with poor amenities, mainly designed for the car not the pedestrian had led to many of the social, cultural, and environmental problems.

Governance of the development process

The New Towns Programme was a public-led partnership initiative involving central government, development corporations, local authorities, public utilities and transport providers, private sector, voluntary agencies, and local communities. Figure 2 provides an illustration of the relations of these stakeholders. Each played a specific and indispensable role as listed in Table 2. Such a governance structure followed the pioneering example of the Garden City movement where a single organisation owned the land, approved the plans and hired the architects and builders, though the New Towns Development Corporations (NTDCs) were fully public funded and associated with a rather 'top-down', expert-led style of governance (Alexander, 2009, Buxton, 1987). The unelected nationalised NTDCs were non-profit seeking public corporations which had no local democratic accountability, but assumed many normal functions of local authorities (DCLG, 2006). This arrangement was argued to be the most effective mechanisms for delivering housing that was affordable to tenants at the time of post-war reconstruction (Schaffer and Silkin, 1970), although problems remained (CTLGR, 2001).

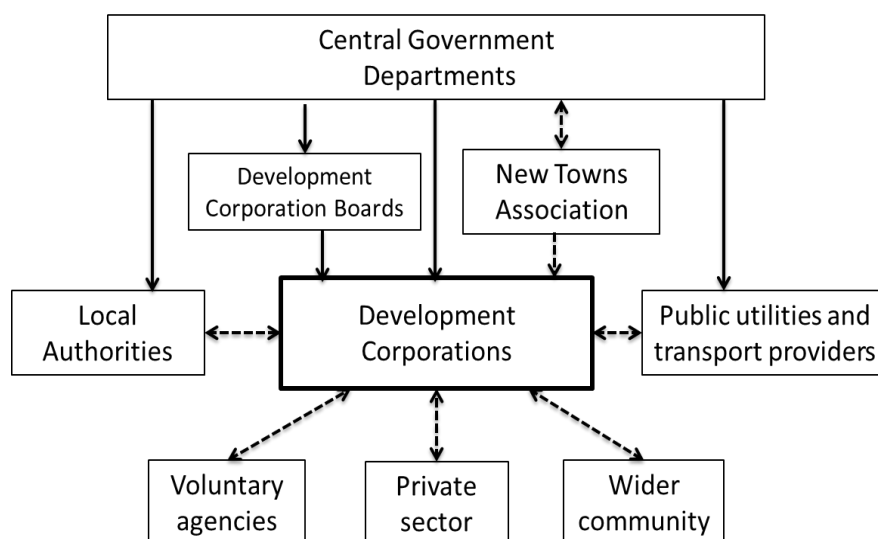


Figure 2. The illustration of relations of the New Towns Development Stakeholders

Table 1. Role and responsibilities of stakeholders

| Stakeholders | Responsibilities |
|--|---|
| Central Government | <ul style="list-style-type: none"> • Oversee the New Towns policy – New Town Act and Town and Country Planning Act; • Designate the sites of the New Towns; • Form the Development Corporations; • Make the principles of planning and approve the masterplan; • Finance the New Towns development • Scrutinise the work and spending decisions of the corporations |
| Development Corporation | <ul style="list-style-type: none"> • Manage the process of development; • Own and maintain the property; • Be responsible for the use of fund; • Marketing the New Town; • Facilitate the creation of community; • Attract inward investment of business for economic growth |
| Local Authorities | <ul style="list-style-type: none"> • Help marketing the New Towns; • Facilitate families moving into the New Towns; • Providing social services to the New Town residents |
| Public utilities and transport providers | <ul style="list-style-type: none"> • School and hospital provision was the responsibilities of local or regional boards appointed by the ministry of education and health respectively; • Electricity and railways were run by nationalised public corporations, reporting to the relevant central ministries • Gas supply was also nationalised, though was administered by regional area boards; |

| | |
|----------------------------------|---|
| | <ul style="list-style-type: none"> • Public transport was provided by a variety of operators, many of which were in various forms of public ownership; • Water supply, in most cases, was a local authority responsibility, through joint boards of local authority appointees |
| Private sector | <ul style="list-style-type: none"> • Confined role of involvement; • Manufacturing investment only in the first generation of the New Towns in the 1950s; • Office development Shopping centre buildings in partnership with Development Corporation later; • Housing builders in the 1970s and 80s |
| Voluntary agencies and community | <ul style="list-style-type: none"> • play limited role albeit churches and other communities have involved in the building of new churches and community buildings |

Source: Author compiled from various sources

First, as shown in Figure 2, the NTDCs were delegated the central role of making things happen under the support from the central government. However, the central government's responsibilities were split between several central departments and there was no single central point of contact for approval on all matters with which the NTDCs were obliged to concern themselves (DCLG, 2006). The ministries or central departments involving in the New Towns were certainly not all-powerful, particularly those responsible for public utilities and transport, which were nevertheless managed by public corporations or area boards, which may have their own priorities other than the New Towns (Alexander, 2009). Co-ordination therefore was often made difficult between the NTDCs and the central ministries and departments as well as with public utilities and transport providers. Aldridge (1979) notes that the persistence of uncooperative state of affairs was a source of waste of manpower and taxpayer's money.

The relationships with local partners were even more complicated. Because the New Towns partnerships were not made to a precise statutory formula but were agreed on an individual basis (DCLG, 2006), disputes over who to do what regularly took place between the corporations and local authorities (Carruthers, 1996). Local councils were elected to represent local population and traditionally had responsibilities for local development, once the job was taken over by the NTDCs, they just did not like being told what to do with the area (Aldridge, 1979). Politically, the population who were relocated from the inner-city to the New Towns, as purposed, were mainly working class who were mainly Labour's voters. Their entry to the Conservative-voting heartlands was particularly unwelcomed by the local natives, and, in turn, the local politicians (Carruthers, 1996).

Second, the New Towns Programme was a political dynamic to provide people with housing and jobs in the context of post-war reconstruction. Under the Labour government, the creation of welfare state also meant making public rental housing available to working class the responsibility of the state. In order to keep the costs low, NTDCs were given compulsory purchase power to buy land at current use value (agricultural use) (DCLG, 2006). Private housing developers were rejected to involve. This was an advantage to maintain affordability while housing remained in the public sector,

but on the other hand, affordability to tenants meant a strong bipartisan political commitment to public sector housing subsidies, which deemed to be politically unaffordable in the long run (Alexander, 2009).

Last, but not least, the New Towns Programme launched by the post-war Labour government was actually built during the Conservative government of the 1950s. When the Conservative returned to power in 1951, the government criticised the New Towns Programme was a ‘state socialist utopia’ (Glancey, 2006) and would lead to inefficiency and publically unfair. Instead of creating more new towns, the Conservative government switched attention to encouraging local authorities to expand existing towns and produce high-rise housing in the inner cities. However, after 10 years followed this approach, the Conservatives admitted the effectiveness of the NTDC model and designate the second generation of New Towns but with different planning principles. Once returned to government in 1964, Labour then commissioned a third generation of New Towns which together with the second generation were built well into the 1970s, albeit the rules of financing were changed (see below) and allowed limited involvement of private housing developers. Bennett and Dunnwoody (2002) claim that many problems could be attributed to the discontinuity of the commitment to the New Towns because of the political changes.

Financing the Development of New Towns

The development of New Towns was financed by loans from the British central government thanks to the Labour’s vision of welfare state which saw the provision of social security and services (include housing) as the inescapable responsibilities of the government. In the immediate aftermath of post-war period, to meet the pressing demand of housing required huge investment which was impossible for individual or even local authorities to rise in short time in the context of economic destruction by the Second World War. The guarantee of financial support from the central government provided essential backing for the New Towns. Nevertheless, rather than taking for grant, the funds were provided in a form of redeemable loans at a fixed rate of interest for a 60-year period (UK Parliament, 1946). The interest rate for the first generation of New Towns was 3%, but from the 1960s interest rates began to rise, and by the 1970s, high interest rates were affecting the financial performance of the later generations of New Towns quite dramatically (DCLG, 2006). The differentiation of interest rates between the first and late generations of New Towns not only reflected the change of national economic conditions, but also, perhaps even more importantly, as a result of political changes. The first generation, in particular, New Towns around London, were developed to house ‘Londoners’ to tackle the problems of housing shortage and overcrowding in the inner city of London (Schaffer and Silkin, 1970). This was rather a result of political struggle. Low costs of funds from the central government provided confidence, reduced risk, and gave credibility to the development (DCLG, 2006). However, the social, political, and economic climate had changed significantly by the 1960s. When the late generations of New Towns were designated, the prioritised objective was instead of economic growth (Cullingworth, 1979). Drawing on the relatively success of the first generation of New Towns, it was believed that the investment in the New Towns would produce profit more quickly than expected (Turok, 1990). The regulations on borrowing therefore were modified to ask the NTDCs to pay higher interest rates. However, since the late generations of New Towns were geographically located outside the great London region where the conurbations themselves were facing economic problems, the New Towns found hard to attract industrial investments. The high interest rates had led to the New Towns ran up significant

debts which later had to be written off (Peiser and Chang, 1999, Sorensen, 1993).

The NTDCs were not allowed to borrow money from other sources other than the central government. Instead, they were empowered to purchase land at near existing use values calculated mainly at the agricultural price levels to keep the costs down (Thomas, 1996). This has both advantages and disadvantages. First, the low land costs allowed the NTDCs to provide tenants with low rental housing which has been proved helpful in attracting people to move in. Second, it helped attracting industrial investments, particularly the costs sensitive manufacturing sector. On the other hand, this was criticised as unfair by the landowners. But in practice, this was made possible only because most lands (include agricultural land) were owned by few very rich landlords (less than 10% of the total population) whose livelihood were no longer relied on land in an industrialised country. Even though, the NTDCs found it becoming harder and harder to adhere to this in practice because the landowners wanted more and more with the progression of the development (Rowan-Robinson, 1997).

The difficulties were aggravated by the economic recession as a result of deindustrialisation from the early 1970s. In order to sustain the New Towns Programme, the involvement of the private sector was positively encouraged by the government. NTDCs were allowed to sell or lease out land at market prices to private sector to carry out the development of private housing, shops, factories, warehouses, offices and other commercial buildings in accordance with proposals set out in the New Towns Act. The Conservative government under Thatcher went even further to introduce the 'Right to Buy' policy encouraging owner occupation in housing prompted increased housing sales of public rental property whilst encouraging the involvement of private house builders in the development of New Towns (Lock, 1989).

Up to the late 1960s, the main revenue of the NTDCs was housing rents. Although land used for schools, open space, and public parks could be transferred to local authorities or other bodies to manage and maintain the facilities, NTDCs needed normally to provide material support to local authorities to maintain them (DCLG, 2006). Subsequently, revenue was raised through selling housing for owner occupation under the 'Right to Buy' policy and land disposal at market prices which gave the NTDCs the monopolised power to benefit from the increased land value. However, for financial as well as political reasons, such revenues were used only to repay the central government loans. By the time when the NTDCs were wound up, the assets of the New Towns were either disposed or transferred to the Commission for New Towns – the successor of NTDCs, with no development function (Strachan, 1980). Given the New Towns have now been built for at least 30 years, many are facing issues of run-down public facilities, deteriorated public spaces and aging housing estates (Lipman, 2002). Unfortunately, the reinvestment needs of New Towns have not been addressed by the government (CTLGR, 2001).

Creating and fostering social capital

The British capitalist was changed fundamentally by the creation of welfare state. The welfare paradigm may be characterised by 'putting people first' which has been the guiding principle for policymaking since then. When the New Towns Programme was planned, it was decided to provide affordable housing and decent and safe community to everyone (Glancey, 2006). In order to do so, 'creating communities' for people went to the first of the New Towns objectives. By definition, the term 'community' is referred to a group of people living in the same neighbourhood, having a shared identity around the place they live, the social infrastructure they use, and a place with strong social

networks, neighbourliness, trust, and so on (DCLG, 2006). Creating community is to employ these elements to provide people with high standard of living conditions and environment to lead the society toward healthy development. A community is a basic unit for ‘social capital’ building.

From a physical perspective, central to the creation of communities was the idea of ‘walking distance communities’, which meant, developed from Howard’s notion of Garden City, within each neighbourhood there would have a primary school, parade of shops, post office, chemist, church, pub, community centre and sports facilities. Such facilities were made publically accessible and useable for multiple purposes, particularly for the schools which were also used as centres for other social facilities, such as pre-school and health centres. This design of the New Towns was seen by some as a key to creating walking distance communities (Waterman, 1996).

In practice, in the early stages of some New Towns development, however, the provision of above social infrastructure, local shops, and entertainment, as well as public transport, did not keep pace with houses. People who moved into New Towns at this stage experienced many difficulties, which hindered the creation of communities. Nevertheless, as many of the New Towns residents were families with young children, the NTDCs had worked hard to provide enough schools and teachers to achieve the objective of having one primary school within each neighbourhood (DCLG, 2006).

However, physical facilities only provide a very important condition but not adequate to the creation of communities with strong social capital which involves inclusive social interaction amongst different social groups (Southerton, 2002). Given the fact that most houses in the New Towns, particularly of the first generation, were built for rent, the standardised houses failed to attract the middle-classes and, in turn, to create integrated communities involving different social groups. This was partly because of the general economic conditions in the immediate aftermath of the War period when the first priority on the policy agenda was to provide jobs to relatively low skilled labourers who were either jobless after the War or houseless as a result of the War bombs. Labour intensive manufactures were thought to be the best solution and thus welcomed by the NTDCs to invest or relocate in the New Towns. Consequently, the communities in the New Towns were characterised by homogenous socioeconomic groups which became a problem when deindustrialisation took place later on. Although the subsequent generation of New Towns saw a shift towards a greater mix of housing types built for mixing tenure and occupational groups, the enlarged physical spaces of communities (for example, the master plan of Milton Keynes was a grid of roads at roughly 1000 meters) made the in-community interaction difficult (Edwards, 2001). Furthermore, the lack of housing that took into account the needs of elderly people and ethnic minority groups prevented truly ‘integrated communities’ from being created (Commission for Racial Equality, 1980, MacGuire, 1977, Wrench, 1993). Harman and Joy (1987) note that the lack of housing specifically catering for the elderly population had generated a significant problem in some New Towns.

The economies of the New Towns

When the New Towns were planned, the planning goal was to integrate communities and employment for the New Towns to be the new places where homes and jobs were readily available for newcomers to ‘slot into’. In other words, the policymakers and planners wanted the New Towns to be growth oriented self-contained areas. Looking back on more than 60 years of the New Towns, the goal was achieved in some of the New Towns but failed in others, albeit the situation has been changing from time to time. The most successful New Towns in the 1950s and 60s might have become the most deprived areas in the 1970s and 80s. It is therefore impossible to draw a single

conclusion about whether the New Towns are economically successful or not. In this paper, instead tapping into a comprehensive measure of the economic status of the New Towns, the attention is rather to look at the planning and policy conditions that underpin the economic performance of the New Towns.

From the planning perspective, the first generation of New Towns took Howard's (Howard, 1902) idea that a population of 32,000 would be a reasonable base-line figure for new settlements. This idea was an intuitive response to the problems occurred in large cities at the time when car ownership and public transportation was not common (Miller, 1997). With the 'walking distance communities' planning where employment and homes were mixed, and the favourable macro-economic environment, this worked well in the 1950s (Bull, 1967). However, when the macro-economic conditions changed, most New Towns were found too small to be self-contained. Many of them turned back to dormitory suburbs in the sense that they operated on the basis of daily exporters of labour (Cervero, 1995). The significant improvement of highway system and the growth of car ownership contributed to a growing proportion of longer journeys commuting which is criticised unsustainable.

The urban economic literature suggests that towns with a target population of 150,000 to 300,000 were able to offer 'adequate' choice to employers and employees, and a full range of social, cultural, educational, health and other facilities (Cervero, 1995). But this may not be the case either, as found in Milton Keynes, the largest of the New Towns with a target population of 250,000, where 'self-sufficiency' was not guaranteed since many people were commuting out the city for employment (DCLG, 2006). Lock (1997) asserts that only at the regional scale of planning can a meaningful balance be sought between the need for urban development, and economic activities, the enhancement of the environment and conservation of natural resources and the cultivation of biodiversity.

The optimum size for self-containment of the New Towns is also related to the issue of location. Theoretically, more remote towns require a larger size for any degree of self-containment, while towns closer to existing large cities can be smaller to provide day-to-day needs (Cervero, 1995, Miller, 1997). This was evidenced by that the overall performance of the expanded towns which worked better than New Towns and that the first generation of New Towns which are located around London worked better than others which are located away from the large cities (Hall, 1997).

Planning for economic self-containment has been found overwhelmingly relied on manufacturing sector. This planning strategy worked well in the post-war period when the reconstruction provided a favourable macro-economic environment which saw the low interest rates, relatively low inflation, and full employment. Between 1960 and 1978, despite the overall decline of national manufacturing employment, falling by 11.5%, it was increased by over 25% in the New Towns and over 50% in the Expanded Towns (DCLG, 2006). However, majority of the New Towns were planned to be based upon single employment, for instance, defence and the motor industries were dominated job providers in Redditch, while Runcorn was highly dependent on the chemical industry and Stevenage was over-dependent on the aerospace industry. Few NTDCs even made the policy in favour of allowing only manufacturing jobs to locate in the town. When the macro-economic environment changed, all had to come to terms with the decline and struggled with problems of higher proportion of unemployment.

The less diversified industrial structure in the New Towns was proved to be more vulnerable to the changes of economic environment (Fothergill *et al.*, 1983). Although some New Towns have been

particularly successful in attracting firms in high technology industries from overseas countries, such as the US and Japan, in the 1980s (Begg, 1991), the mismatch between housing, community development, and labour skills provision, and employment requirements hindered the overall performance of the New Towns.

Sustainability of the New Towns

Urban sustainability may be assessed in many different ways, but for the purpose of this paper, it considers a cross-cutting theme approach to analyse the effects on the New Towns' sustainability caused by each theme discussed above, highlighting the adaptability to changes of social, economic, and environmental conditions. The British New Towns were developed over a fifty-year period and each phase of development brought with it contemporary ideas that reflected arguably the best practice at that time. Therefore it is hard to draw a single conclusion on whether the New Towns are sustainable or not. Indeed, even within the same generation or individual town, things can be different from different aspects and time.

From a planning perspective, at the time when the first generation of New Towns was planned, private car ownership was not as extensive as today. New Towns were planned for accommodating 30,000 to 50,000 populations each at very low density following Howard's idea of Garden City planning. However, Howard's original idea of Garden City may be better understood as what today would call a city-region or urban cluster where several garden cities are clustered in a functional economic region, whereas the New Towns were planned as mono-centre of settlements and often with one or two dominated industries of employment. The size of the New Towns which was expected to be self-sufficient at the time of planning has been proved vulnerable to the changes of economic conditions. Most of the New Towns began to fall out of favour when the recession occurred in the 1970s, and unemployment rates were much higher than that of national average (DCLG, 2006). On the other hand, the low density development has led the New Towns to come to rely on cars in the followed decades which made the 'walking distance communities' no longer workable (Madaani-Pour, 1993).

The later generations of New Towns however went on to the other extreme to prioritise private transport with large gridded road design and even lower density. As in Milton Keynes, although one may argue it is very 'green', the very low density development interspersed with large, mono species (i.e. grassed) areas does not contribute to bio-diversity or social sustainability. The architecture and layout also failed to provide the structure and conditions for decent places for building and sustaining communities, which had to be replaced later on. There was also a problem of using untried materials and detailing. All these shortfalls made the New Towns a serious challenge in terms of physical regeneration (CTLGR, 2001).

The top-down management style gave the NTDCs authority to build, manage, and maintain the New Towns. Being led by the professionals, this ensured the design and development of the New Towns harvesting the contemporary knowledge and reflecting the best practice of the creation of large scale new settlements at the time. This centralised professional-led governance was highly efficient at the planning and building stages, but when the planned building work finished and the local communities were created, it became problematic. First, this generated conflicts between the NTDCs and local authorities over administration and services provision, which became a major factor leading to the significant deprivation later on. Second, this led to the New Towns differentiated from their neighbouring communities which, in turn, developed social tensions

between them and other communities (Alexander, 2009).

The use of land value as a means of subsidising the development costs and attracting inward investment underpinned the initial success of the New Towns in the 1950s and 1960s. The increased costs of land acquisition combined with the high interest rates to the later generations of New Towns have made financial deficits. Although the debts were written off by the central government in the 1980s, this hindered the development activities and inward industrial investment in the 1960s and 1970s.

Concluding remarks

This paper has discussed thematically lessons from the development of British New Towns. Themes were selected based upon the consideration that they are relevant to the ongoing new town movement in China today. The analysis of the existing literature began with the fundamental questions: new towns for whom and for what? The answers to these fundamental questions determine to a large extent the answers to the subsequent technical and methodological questions, such as where to locate the new towns? How to design the new towns and buildings? How to finance the development of New Towns? How the development process could be managed efficiently? How to attract people to move in and settle down? How to create employment? Drawing on the literature dealing with the British New Towns, it found both positive and negative lessons from British New Towns movement are highly relevant to the Chinese practice.

First, when a new town is planned, the policymakers and planners must make it clear what the purposes the new town is built for, i.e. economic growth or better quality of life for people? The first generation of British New Towns was made clearly for people to improve their quality of life, whereas the later generations were planned for economic growth, although the first generation was in reality more economically successful than the later ones. Even if the purpose is set for people, the then question is for which social group(s). One of the major downsides of the British New Towns was the lack of places for ethnic minorities which has hindered the creation of integrated social communities and become the underlying factor leading to social tensions.

Second, once built, the life circle of an urban area as a whole is much longer than any buildings and tenants within it and it is extremely costly to make change. This is particularly true in terms of road systems. Therefore, urban design needs to be thought through at every level from the outset, following a multi-disciplinary approach where common agreement is established between the different professionals involved in the plan making. In an increasingly rapid changing high-tech age, it must also be flexible enough to adapt to changing circumstances and demands. The early and the late British New Towns followed different principles of urban design. Although the first generation of British New Towns was designed at the time when private car ownership was not extensive, the road systems were able to meet the need of rapid growth of motorised traffic even after 60 years. In contrast, the late New Towns which prioritised private car transport have encountered many more problems.

The notion of walking distance communities combined with mixed use development at the local or district level mitigates problems associated with dispersed and separate land-use provision: particularly work journey 'tidal flows'. This not only involves 'zoning' and 'walk to work' concepts in urban design, but also links to the economic planning. The British New Towns were planned for self-containment, but they eventually became dormitory suburbs due to the small sizes and over-reliance on single type of industries. Given the New Towns were deliberately chosen to locate farer

from the large cities, this resulted even longer distance of commuting which is deemed unsustainable. Third, developing a new town requires astronomical costs. Financing a new town development therefore cannot rely on any single source of funding. The 60-year-long loans at a fixed low interest rate provided by the British central government laid a concrete foundation for the New Towns infrastructure investment. While this has been fundamentally important in keeping the costs down and providing affordable housing for the majority of public mass, the central government found it increasingly difficult to keep up with the growing demand of funding. The shift to higher interest rates charged to the later New Towns has nevertheless led to the financial deficit.

The use of land value to finance new town development is controversial. The NTDCs were authorised to purchase land at the agricultural use value in order to keep the overall development costs down, while were not allowed to sell the land to users at the urban use value to make profits. This worked effectively well both in terms of preventing disputes in land acquisition and producing affordable housing before the 1980s. Marketization as a way of financing the new town development may be efficient in a short term, but will not be sustainable without proper intervention. The rejection of the involvement by private property developers, and the ban of land financialisation and commercial loans ensured the realisation of the goal set for the British New Towns to become places with affordable housing. However, the introduction of market mechanism in the 1980s has soon led to the land and housing prices unaffordable.

Fourth, the management of new town development is a process of societal construction. The success of a new town cannot be assessed by looking superficially nice and the speed of construction work in a short term, nor can it be used for making profits for the government, but more importantly to make the new town a place where people can have affordable and decent housing and develop communities easily so that to live their life more comfortably and conveniently than before. This requires high quality of management led by professionals and effective governance involving all stakeholders of the new town. The British New Towns governance framework worked moderately well. The centralised arrangement of governance had indeed led to the NTDCs playing a monodrama. Reducing the role of local authorities and the discontinuity of support from the different departments of central government forced the NTDCs to spend much more extra energy and money to get the job done. When the major construction work had done, letting the NTDCs to keep assuming functions that should be played by local authorities was the underlying factor leading the New Towns to isolation from neighbouring communities.

Fifth, in facing challenges posed by the eco-environmental degradation and rapid changing globalised knowledge-based economy, sustainability has become the decisive factor in the development of new towns. Except low density, the idea of Garden City appears to be better than the modernism of urban development that dominated the thinking of urban planning and design in the 1960s. Furthermore, sustainable thinking not only involves planning and design, but also the location choice, the economic structure, the behaviour of consumption, the consistence and consensus of development activities, and the detailed day-to-day management. In other words, sustainability is a social construction.

For policymaking, the policymakers need first to answers honestly whom the new towns are built for. If it is for people who need places to settle down, then the question is how to make the mechanisms working for providing decent and affordable housing to the vast majority of public mass regardless of their Hukou and occupation. From a historical point of view, the development of a new town is the process of creating social assets. Sustainable thinking therefore requires any

decision needs to be made based on aiming to the long term success rather than immediately political achievement and decision-makers personal interests.

For planning and design, a new town must be aimed at sustainable development. This requires the planning to be looked at the regional level as a functional economic region to provide diversified job opportunities for people and diversified skills of labour force for employers. Urban road systems, public utilities and services, leisure, and shopping facilities must be workable for people to live their life conveniently drawing on the concepts of 'walking distance communities' and 'walk to work', while minimising the reliance on motorised transportations. Housing types and functional facilities must also be designed for all social groups, especially for aging, disabled, and ethnic minorities, to meet the needs of different sizes of households rather than differentiated only by income.

For implementation, a sustainable mechanism requires continuity of political and policy support, a consensus among all stakeholders, the consistence of institutional arrangement, a reliable financial mechanism, a well-qualified management team, and learning from best practice. Over-reliance on market force without proper intervention and financialisation of land value must be banded. Last, but not least, houses are built for housing people who are houseless or have yet been properly housed by the average standard rather than for investment for profits making.

Overall, developing a new town is a systematic engineering requires consistence between decision making, planning and design, and delivery. A new town development aiming at socially, economically, and environmentally sustainable needs to be thought through at every level and details at the outset to maximise the great consensus among policymakers, planners, designers, public utilities and services providers, development managers, and end users. More importantly, development activities need to be carried out based on the mechanisms that are coherently conducive to the policy goal.

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