Renewal of The Swedish Million Dwelling Program, the Public Housing Company and the Local Community, Hindrances and Mutual Aid

Lars Steiner and Zahra Ahmadi

Abstract—Public housing is a vital factor in community development. Successful city, housing and eco system regeneration design is essential in providing positive community development. This concerns work places, nice dwellings, providing premises for child care, care of the elderly, providing qualitative premises for different kinds of commercial service, providing a nice built environment and housing areas and not the least activating tenants. The public housing companies give value to society by stimulating people, renovating socially and economically sustainable as well as being partners to local business and authorities. By their activities the housing companies contribute to sustainable local and regional growth and the identity and reputation of cities. A Social, Economic and Ecological Reputation Effect (SEE RE) model for actions to promote housing and community reputation is presented. The model emphasizes regenerative actions to restore natural eco systems as part of housing renewal strategies and to strengthen municipality reputation.

Keywords—Community Development, Image and Reputation, Public Housing, Renewal Strategies.

I. INTRODUCTION

SOCIALLY housing in Europe, besides Sweden, is mainly a way for societies to provide housing for people that of some reason themselves are not able to finance their living. The Swedish situation is of tradition different. After the war the urbanization in Sweden was big and cities, especially Stockholm grew a lot. Since the housing situation in the beginning of the 1960s was not solved. The million dwelling program then became the grand solution with mass housing production. The “million program” was a government initiated reform to solve the need for family apartments in Swedish cities and smaller local communities during the 1960s. The building of new rental dwellings started 1965 and continued until 1974. About the same amount of dwellings were built during the period 1945-1965. In total more than one million apartments were built. During the same period about 400.000 old apartments were demolished. Half of the apartments are multi residential rental dwellings.

The housing challenges in the studied region Gavleborg are several, demographic, an aging population, urbanization, people moving from the rural areas to bigger cities, and an increasing need for renewal of dwellings and housing areas to attract people’s living demands. Although the “million program dwellings and buildings were modern 1965, the comfort and quality demands from tenants and regenerative demands from the bio region, in 2013 are quite different. The social and ecological demands on housing are much higher, which calls for an almost total renewal of dwellings and buildings.

Buildings’ and dwellings’ maintenance should be an ongoing work to keep premises update and modern. Due to different circumstances about one third of the housing areas from the “million program” have not been modernized and necessary maintenance has not been made. Today 700.000 of the million program apartments are in need for renewal. The areas built 1945-65 that not has been demolished, are in even greater need for renewal. The renewal demands today from technical and social necessity are often even higher than tenants’ customer demand for renewal. The landlords are in a difficult situation, since there are sustainable financial, social and planning problems to be solved in the housing areas in need for restoration.

The “million program” was built in a period where the environmental considerations were low and ideas of man having the right to exploit nature. The architecture was inspired by the architect [1], a modernist who considered dwelling houses to be “machine habited”, machines to live in and meant that rationalism should be guiding every building and city construction project. Vallingby in Stockholm was one of the first million program areas:

Fig. 1 Vallingby million program area, Stockholm (source: upplandia.se)

Reference [1] studied property development companies in the UK found that to create reputation for sustainable development some companies as a competitive strategy choose corporate responsibility strategies. Like property development companies, housing companies are expected by...
tenants to go beyond their profit agenda and apply social responsibility [2], [3], [4], [5]. Swedish public housing companies are by law obliged to apply social responsibility as well as businesslike strategies. Socially responsible housing companies are expected to promote community development as well as sustainable development [3], [6].

Ecological, social and economically sustainable housing companies are today the goal for every community to achieve. A sustainable or green built environment has been challenged by [8], [9], [10], [11] as not productive enough when there are eco systems that already have been damaged with new constructions, pollution and/or toxic spread already in the eco system. Buildings are not sustainably neutral in the natural eco system and especially housing buildings constructed during a period when green building considerations did not exist. To restore the bio region to a state which is in accordance with living systems in nature, a new regenerative paradigm have been introduced for real estate [10]. The community goal for building activity ought to be to design in order to restore the regenerative capacity of nature. As [9] emphasize with a service perspective, the eco system could be analyzed from what are the benefits that tenants get from the eco system. This perspective not only has the advantage of restoring the eco system, but also when consideration is taken to both the functioning of the eco system and the advantages the eco system give to tenants, both nature and society benefit. So far housing companies have been uninterested in taking actions beyond regulations in the environmental laws. Actually the interpretation of the environmental laws is very soft. These regulations now prescribe that any damage on the environment should be restored. Such regenerative actions are seldom taken by housing companies.

The aim is to present and discuss a model in which regenerative design strategies comprise community development, social regenerative actions and eco systems. The paper analyzes and discusses empirically how housing companies deal with the acute problem of the “million program dwellings renewal; theoretically how the natural eco systems surrounding public housing companies might give service to tenants wellbeing and reputation to the community; how external socio-economic factors such as local community wealth and growth or decline affects ways of financing renewal as well as the quality and effectiveness in the renewal process.

Housing, being a community in itself, in this paper is regarded as reversibly dependent on community activities, wealth and development of the hosting municipality. How this reversibility affects housing companies and the local community is comparatively studied with qualitative method, analyzed and discussed against the background of a model of regenerative eco systems [12], [9], [8] and sustainable communities developed by [13] writes:

Communities, it is clear, involve people, social interaction and interaction between people and their physical, social or economic environments, and can be interpreted as fixed to place or relating to groups or communities of interest.

II. LITERATURE REVIEW

The housing area Holma in Malmo, the tenants had the possibility to paint and work in their own apartments and in the housing area to reduce their monthly costs [14]. In Stockholm, Fisksatra, young people started their own businesses to work for the housing company with different things to make the housing area attractive. Housing site and location factors as well as the social composition of neighbors have met growing interest in Swedish housing research [15], [16], [17], [18], [19], [20]. However, not so much attention has been given to the fact that sustainable economic, social and ecological housing is an important factor in community development independent of type of community [13]. Housing is an important factor in rural development studies [21], [22], [23]. The sustainable development building blocks for the re-localized eco-economy are Mobility, Energy, Amenity services, Food and Timber, Information and communication and Waste. They are interesting when analyzing housing renewal, because sustainable housing is a necessary ingredient in sustainable municipality and rural development.

Community is the instrument through which society might fulfill the goal of a sustainable society. Therefor when discussing renewal and renewing apartment blocks, enabling for people to enjoy comfortable dwellings, the goal of sustainable building and management of public housing never can be set aside. On the contrary, both municipalities and public housing companies are communities which, in cooperation might fulfill sustainable objectives toward global sustainability regeneration. Reference [22] outlines a model for the synthesis of eco-activities going on in rural Europe. Reference [22] does not discuss the important impact housing can play in that model, but the model is interesting since many of the factors mentioned are factors that regenerative sustainable housing mean, children empowerment, caring for the elderly, green cycle pathways, housing and household energy efficiency, local renewable strategies to activate tenants, supporting libraries, supporting private facility management/maintenance entrepreneurship and housing area land update entrepreneurship or entrepreneurial ways of financing renewal, just to mention a few. Reference [9] makes an ecosystem services analysis for the design of regenerative built environments. In a situation like in the Swedish “million program” the aesthetic aspects of the buildings and the environments are considered unattractive, which has led to boredom and alienation among tenants, especially for youth a regenerative services perspective might change the situation. References [9], [12] write regenerative design aims to enable built environments to move beyond reducing, removing and stopping certain unsustainable behavior and into creating health and wellbeing by the help of eco system services. As example of how building design or development could contribute [9] deliberately provides habitat for species other
than humans; contributes to soil formation and fertility through careful cycling of wastes; purifies air, water and soil; regulates the climate through mitigating greenhouse gas emissions or sequestering carbon; produces renewable energy and collects water. All these propositions are though not suitable for Swedish northern conditions.

III. METHOD

The methodological chapter describes data collecting methods chosen and the kind of data achieved, also a description of the way this data has been analyzed and a discussion about limitations and problems in the chosen research strategy. The empirical research relates to the research objective of getting knowledge about how public housing companies cope with aging buildings in need for renewal. Financial, tenant’s influence, building maintenance as well as relations to the municipality are questions that are of interest. There are questions and answers here that are unknown for the researchers. Therefore an inductive research strategy is chosen. The intention is that the interviewee will open up and initiate a conversation that reviles views on this matter unknown for the researchers.

Qualitative interviews with managing directors, administrative managers and financial directors in twelve public housing companies (totally fourteen interviews) have been done. The interview duration was one to one and a half hour. The interviews were recorded and transcribed. Data of different kind from municipalities and public housing companies has been collected and analyzed [24]. Qualitative analysis has been done using categorization and sub categorization method described by [25]. The analysis has been inductive since the theoretical analysis has come into the research after or during analysis procedure [26]. Reference [26] emphasized the theoretical grounding of the research results in order to make the findings in accordance with formal theory. Also community data about economic and social conditions from ten years back was gathered from the Swedish Statistical Central Bureau (SCB) for comparative analysis. Public housing companies’ home pages have been analyzed. Besides interviews also a conference has been held with interviewees and representatives from local and regional communes where research questions and interests have been discussed and analyzed together. Community economic social data was compared with company specific data in the municipalities to outline external and internal factors affect housing and especially housing renewal strategies of the “million program” dwellings.

IV. EMPIRI - GROWING, STABLE AND DECLINING COMMUNITIES

The results show adaptation among community housing companies to variation in company internal factors and external economic and social factors when it comes to the companies approach to renewal. Community development is important when planning and decisions about public housing renewal is on the agenda. Since the public housing companies are dependent on the wealth and development of the community, the municipality of the housing company decides what renewal strategies is conceivable to choose. The political influence on public housing policies is strong. All communal company boards are led by politicians. Public housing companies are keen on image and reputation, social security and to create attractive quality housing. They also take a social perspective in the same time as they are supposed to act businesslike. In the analysis of the twelve municipalities we have found three categories of communities. The analysis is based on the situation today and five to ten years back. Differences in renewal strategies can be categorized as fundamentally of two kinds, defensive and offensive. Offensive strategies are taken by Growing wealthy communities like Gavle, about 130 000 inhabitants and Uppsala, about 200 000 inhabitants. The public housing company in Gavle renovated a million program housing area (Oster) and the area has now an improved image and reputation. Another renewal of a housing area in Gavle, won the 2012 Swedish Association of Public Housing Companies (SABO) prize for best renewal. Renewal is partly financed by selling out small parts of the housing buildings to private landlords. The public housing company in Uppsala has 25000 active persons seeking rental apartments and 75000 in total; this public housing provider has the fortune of being able to choose their tenants and the tenants the ability to move while a million program areas are being renewed. Uppsala is the most expanding city in the region only 70 km north of Stockholm. Knowing this, the public housing companies in Gavle and Uppsala work relatively independent of the municipalities, partly because their financial strength is strong.

Stable communities like Bollnas, Ljusdal, Alvkarleby, Tierp, Sandviken and Hudiksvall are in a situation which is interesting, because their situation in some cases is new. Hudiksvall community had during the 1940s, 37000 inhabitants and also today have the same number of inhabitants. The situation therefor is stable also for the public housing company. They have 4350 dwellings in their stock and during the five last years they have demolished 45 dwellings and rebuilt 24 in old buildings from the million program stock. The stable companies in Bollnas and Ljusdal earlier had a negative situation with declining number of inhabitants and resulted housing demolition. Alvkarleby and Sandviken, situated just outside the expanding town Gavle relay to a certain degree on the housing market in Gavle, Tierp on Uppsala. The financial situation in these public housing companies is comparably strong. They have maintenance programs for three to seven years. Due to suddenly upcoming repairing needs the maintenance programs are often being changed. The renewal programs are of three kinds. Small renewals in dialogue with tenants, often two glass windows are replaced by three glass windows, new glassed balconies, painting, sewer renewal, new bathrooms, kitchens and balconies, tapestry or fully refurbished dwellings; fully ecologically renewed buildings and apartments where the
housing area around the buildings is renewed. The strategic challenges in stable communes are renewal with a standard increase. Tenants have low income and are not prepared to pay higher rents. The public housing companies try to adapt by customer orientation towards dwellings for the elderly or for young people. The Bollnas public housing company demolishes some old housing buildings and instead builds new ecologically sustainable passive housing. Selling part of the housing premises to private owners is another way of financing renewal and new building.

In declining communities like Soderhamn, Ockelbo and Hofors, there are no private dwellings markets. Defensive strategies are chosen, where the question of renewal with renewal or demolition of buildings and new production is being analyzed and discussed. In the declining communities the public housing company is tied up by technical problems due to neglected maintenance of the million program buildings and financial problems due to vacant apartments and high immediate repair costs, plumbing, roof repair etc.

One example is the small declining community Hofors about 70 km west of Gavle. The year 1996, this community had 16000 inhabitants, 2012 the number of inhabitants was 9000. The housing company is strongly governed by the municipality and besides housing they are responsible for school, primary and secondary buildings, swim hall, industrial buildings, and housing for the elderly and sports arena for ice hockey. The history when it comes to housing is parallel to the decline in inhabitants.

### TABLE I

<table>
<thead>
<tr>
<th>Year</th>
<th>Inhabitants</th>
<th>Apartments</th>
<th>Vacancies</th>
<th>Demolitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>1924</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>12476</td>
<td>2372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>11239</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>10501</td>
<td>1710</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>9700</td>
<td>1192</td>
<td>200</td>
<td>500</td>
</tr>
</tbody>
</table>

People move from small towns to cities along the coast and to Stockholm, especially women move to service jobs in the bigger towns. The housing company because of the vacancies has to struggle with economic problems. They are economically dependent of low bank interests which fortunately are the case in 2013. The strategies to cope with the declining demand of dwellings have been to demolish buildings and try to sell out housing properties. Selling out has shown to be difficult since the market is weak. One customer category that the public housing company means is a strategy for the future to choose is to renovate dwellings to elderly that might want to move back besides also modern family homes, another is moderate renewals in close contact with tenants. The managing director:

When 80 people move from Hofors, we will have 35 empty apartments. Consequently 35 apartments will necessarily be demolished. In ten years 500 apartments have been demolished. Mostly we make green areas where the buildings have been. Just now there are 200 empty apartments in our company.

Industrial prosperity is a piece of a positive development in a region. Industry gives inhabitants work places and contributes to tax funding in the society. The picture below is a picture of industry development, showing the number of private companies with more than one employee per 1000 inhabitants in some small towns in the region here studied: Also Sweden in total (red) is shown in the figure, Hofors (brown), Bollnas (blue) and Sandviken (green). The number of companies does not determine the dynamics of the industry, but the picture shows that Hofors and Sandviken, both towns being iron mill towns, has very few companies compared to the country in all. Hofors, though won a prize being the municipality in Gavleborg having best growth among companies (17 companies studied in Hofors).

Another example is Soderhamn, a town with 32 000 inhabitants 1975. Today there are 25 000 inhabitants. The managing director:

The loss of inhabitants shows in different ways in the municipality, and of course in the public housing company. In 2011 the loss of inhabitants was 300 people. Today we have 300 empty apartments, which with an average 50 000 SEK level of income /apartment and year, means a loss of 15 MSEK/year for the community housing company. Besides the loss of inhabitants, the town inhabitants’ medium age is high with a trend towards even higher.

The public housing company Faxeholmen in Soderhamn has 2012, 3200 apartments. There has been a reduction of 1600 apartments since 1995. That means a reduction with one third of the total number of public housing dwellings. The
number of companies with more than one employee per 1000 inhabitants is though in Soderhamn above average in Sweden. The flow of people who moves out from Soderhamn has diminished during 2012.

There has been very little sewer renewal done in the million program dwellings. These are very costly and also often mean problems for the tenants. Relining is a method that does not mean too many problems for tenants. In Soderhamn only 100 relining have been done, otherwise no sewer renewal. Since the million program dwellings soon are 50 years old this is necessary if the alternative is not chosen, that is to demolish the buildings. Most public housing companies, whether their housing market is positive or not, sewer renewal is the triggering cue to full restoration of a building. Since Soderhamn today has four hundred thousand euro costs each year from water damages sewer renewal or demolishing the housing building are the alternatives. The managing director: We will be more proactive and work with prevention. The housing market in Soderhamn is like most other places in the way that the most wanted apartments are those in the center of the city. The demogration situation (35 % of the tenants are elderly people) means that tenants living in the rural towns outside Soderhamn have a wish to move into the city area, leaving empty apartments in the suburbs. The declining municipalities have a higher average age in the population.

The stable public housing company in Ljusdal has during ten years’ time demolished 800 dwellings because of diminishing population. Today this municipality’s population base is stable. The public housing company therefor opts for maintenance of existing building stock to develop living for different groups in the society, for example young singles, families and elderly people. It is important for the company to generate return on investments to be able to mend dwellings. Raise in rents can only be applied when there are improvements in the dwellings. The managing director:

Market-relatedness and profit in real estate means long-sightedness. Long-sightedness means that maintenance is done all the time. Higher rents cannot be taken out for maintenance that obviously not makes the dwelling better. The problem that the communal company has is that maintenance of the “million program” has not been done and therefore costs that should have been taken out from earlier tenants have not been done.

Neglecting maintenance is one of the reasons for demolition and new production. In an expansive market there are all categories of tenants, wealthy and not so wealthy. Then the demands for businesslike rents are not as problematic as in declining communities. The new law about businesslike rents for public housing companies does not give incentives or even possibilities for the company to fulfill the other law concerning public housing companies. This law regulate that the municipality should take social responsibility and offer dwellings for all inhabitants in the municipality. As it is today public housing companies sometimes try to combine social responsibility and acting businesslike.

Engagement in premises for social activities in the municipality is common. Premises for libraries, schools, theaters and cinemas are found in the public owned real estate company. To engage in activities that create commitment among tenants for their own housing area give security and well-being, less destruction of property and more housing tenants. The managing director in an expanding municipality (Uppsala):

The first we wish for is more satisfied customers. The second we wish is to have an enjoyable town and the third is a living city. We refurbish the elderly housing stock and build new housing dwellings. That is our new vision.

A. Sustainable and Regenerative Million Program Renewal Design

Below, two sustainability housing strategies are described, Bollnasbostader [29] and Uppsalahem [28]. Sustainable housing is a responsibility that Bollnasbostader take concerning the local environment. Bollnasbostader used environmentally friendly heating, ventilation control, energy saving, environmentally friendly transports, electricity from water and sun cells, radon measuring and decontamination, energy efficient washing and motor heaters, natural cold media, energy efficient lightning, environmentally friendly material and chemicals, water saving equipment, separation of dangerous waste and separation at source. Uppsalahem also work with housing sustainability. Their responsibility is though active according:

The goal with our work in the energy and environmental area is to make Uppsala a greener city, and that our living areas become nicer and more environmentally friendly to live in. (Uppsalahem)

Energy efficiency is both ecological and reduces costs for heating, which are high in Sweden. When the market demand for dwellings is stable and customers not so demanding about the most expensive kitchens and bathrooms, then the housing company might renew million program buildings to the renewal and rental level that the tenants wish. In the comparably small towns of Gastrikland a frequent dialogue between landlord and tenants is possible. A managing director:

Everything that happens in the society, we notice it among the tenants. We feel when they get problems.

V. DISCUSSION - MAINTENANCE, BUSINESSLIKE RENTS AND SOCIAL RESPONSIBILITY

A. Social, Economic and Ecological Reputation Effect

The social, economic and ecological effect of municipal and public housing companies acting is enhanced or reduced
reputation. Therefore, sustainable actions in order to renew the “million program” are on the agenda both for the municipality and the housing companies. Effects on social actions mean that the housing companies inform and take responsibility as landlord for tenants’ comfort and wellbeing.

1) Passive Versus Active Sustainable Theory and Actions

The housing company (Bollnas) [29] also has sustainability education, sustainable procurement and environmental management systems. All these actions are examples of contributions not to cause any more damage on the natural environment. It could be called a passive sustainable strategy of housing. A new dwelling house has been built “passive house”, that is very energy efficient and sustainable. When analyzing Uppsalahems [28] environmental policy, it is not easy to find any regenerative eco system actions taken, since the actions that is taken or planned are passive. To build a new building for high quality housing is often easier and cheaper than making renewal in old buildings in the same time as customer and eco system adaptation can be done. Examples on the other hand of active regenerative sustainable actions are contributions that aim to restore the eco system [7], [8], [9], [10]. Examples to restore fish populations in lakes and rivers; contributions to create habitat near the towns for wild animals and birds; analysis of flora and fauna, contributions to restore certain species; aesthetic contributions to restore nature where there are damage. Picture four below shows other actions that work regenerative towards the eco system and contributes to both the public housing company and municipality reputation. Reference [27] developed a model for understanding how image translates identity into reputation and vice versa. Analogously the identity and image of a community translates into reputation. The effect we call a Social, Economic and Ecological Reputation Effect (SEERE).

2) Financing Maintenance Costs by Standard Improvements

The dilemma when it comes to renewal of the million program dwellings is how to finance this. The neglected maintenance in many housing buildings should have been paid by the tenants that occupied these premises before today. On hindsight to ask present tenants to finance neglected maintenance is neither reasonable nor in cooperation with the existing housing law. The housing companies cannot finance this and the municipalities cannot let the tax payers finance neglected maintenance. The solution has been to negotiate this with the tenants union, which agree on small raise of rents if the renewal means higher standard for the tenants compared with before. By doing standard improvements in the same time as maintenance renewals of sewers, kitchens and bathrooms, the tenants union might authorize raised rents. One example is when two glass windows are replaced by three glass windows, which in a cold climate give higher warmth comfort and in a noisy environment lower din levels. Besides that a certain amount of higher rents helps to finance this replacement, energy cost reduction lessen the energy costs for the public housing company. The smaller energy costs though mean smaller income for the communal energy company. From a municipality economic perspective the energy consumption reduction does not mean so much in economic terms.

VI. CONCLUSION

Renewal of the million program dwellings and housing areas in close contact with tenants and the association of tenants has proven to be successful among many of the studied public housing companies and also the ability to engage tenants in taking care of their dwellings and housing areas. Successful public housing and housing renewal strategies where regenerative perspectives are used will reversibly positively affect the image and reputation of municipalities, thus having impact on future communal wealth. To attract people and companies to move to a place the public housing companies play a leading role in the municipalities, besides the local industry. Dwellings besides work are the most important factor for inhabitants of a society. The welfare of tenants in building areas designed in accordance with demands of nature and where all benefits from nature are used without exploiting the eco system could turn “million program” areas. Modern, safe and ecologically sustainable dwellings continually renewed in cooperation with tenants, engage and give a municipality reputation for taking care of their inhabitants. When the public housing company...
works to make the tenants domesticate, stay and makes people and companies move to a place, the municipality as well as the public housing company get good reputation.

Maintenance of existing premises, investments in modernization and new housing buildings, in the same time as demolishing inefficient buildings is actions that the public housing companies take in order to fulfill their public function as local housing providers for the population in a city. Their assignment is to provide housing by taking social responsibility and responsibility for nature consistent with the local housing market. Doing housing business consistent with the local market is normally not a problem for the studied housing companies. There is though difficult in some cases to draw a line between the responsibilities of the housing company and the social authorities of the municipality.

The answer to the question of what is the first and foremost responsibility of the public housing company might not be return on investments or social responsibility to tenants, but instead health and welfare to both tenants and the natural surroundings.

The results show differences between communities and companies in their approaches to renewal. Housing companies in rich cities have clear strategies which mean that renewal is successfully fulfilled in those areas where there is immediate need for renewal. Renewal of the million program housing areas and production of new housing buildings are done to offer high quality apartments to both wealthy and not so wealthy inhabitants. The SEERE model presented offers understanding of the opportunities for housing companies to enhance the reputation of the company and the community while they renew the million program housing areas.

REFERENCES


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