



CHALMERS
UNIVERSITY OF TECHNOLOGY

A study of how Egnahemsfabriken could be providing sustainable solutions to some of society's most challenging issues

How an application for collective house building projects and local food production can improve integration, reduce the housing shortage and create other synergies throughout society

Master's Thesis in International Project Management

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Department of Architecture and Civil Engineering
CHALMERS UNIVERSITY OF TECHNOLOGY

Master's thesis ACEX30
Göteborg, Sweden 2020

MASTER THESIS ACE

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ABSTRACT

Sweden is in a difficult position with big challenges to solve with integration and supplying accommodation for groups of people in socioeconomic vulnerable positions. As the world economy is trembling in front of what very well could be one of the biggest economic crises that we have experienced in our lifetimes, these issues are surely not going to disappear by themselves. Egnahemsfabriken are looking for solutions that could potentially have immense impact on both of these challenging issues. However, they have not quite managed to succeed in actually providing what their main goal is; to build homes for, and together with, the most socioeconomic vulnerable groups in society which have been identified as immigrants, young people and old people. They have on the other hand already achieved great results in creating a local force to be reckoned with in the form of an arena in which social endeavours related to social building, food production, sustainability and especially integration is taking place. This research has taken a viewpoint of analysing the business model of Egnahemsfabriken as a multi-sided platform with various user sides represented by self-builders, investors, charitable funds, companies and individuals who are interested in contributing. As such, the study found a few areas in which Egnahemsfabriken potentially could improve in order to gain more traction and reach its goals. In order to empower and create an environment in which its various user sides would take more initiative it could be necessary to build an online platform in the form of an application. The idea is to design an app that makes it easy for these different user sides to interact on their own terms, while at the same time providing guidance and opportunities to offer goods and services, transparency for investors and possibilities of quality control. The app should be open to initiatives from all sides, where investors, charitable funds and other contributors more clearly can see what difference they are making, thus giving more incentive to continue to contribute. If the app is easy to use, open to various social activities and ways of conducting business, it could turn out to unleash a wave of entrepreneurial spirit that could create ripple effects on the local economy.

Key words: multi-sided platform, sustainability, social building, socially responsible investments, scaling, governance, local economics, food production, crowdfunding, crowdsourcing, open source, solidarity, entrepreneurship

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First and foremost, I would like to give my humble appreciation to all the people involved in Egnahemsfabriken. It is not only a clever concept but also a sincere attempt to make a huge impact throughout our society and we can never get enough of these types of brave endeavours. The inspiration to finally write my thesis is largely derived from their attempt to make a positive difference and at the end of the day, that is what I am trying to achieve with the work in this thesis.

The most important part of collecting information and generating ideas has come from casual conversations with people that are, in one way or another, involved with Egnahemsfabriken. This mainly took place during my time building on my own project as the first self-builder at Egnahemsfabriken. To mention just a few of all the beautiful people involved I would especially thank Tinna Harling, Erik Berg, Christian Rubell, Ahmed Salawda, Jenny Stenberg, Niklas Wennberg, Anna Berglund, Maja Fagleborn-Willner, John Fjällbrant, Raed Tuurani, Alaa Saed, Markus Mattiasson and many more that I have had the great pleasure to interact with. The scientific approach towards analysing Egnahemsfabriken has truly been interesting but was amplified by the casual interactions with these people who genuinely want to strive towards a better society and to address the very issues that Egnahemsfabriken has at heart.

I would also like to give my humble appreciation to my supervisor Agnes Andersson Wänström and my examiner Viktoria Sundquist. They were crucial in the important process of manifesting these ideas into a scientific work.

Lastly, I would like to thank all the people outside of Egnahemsfabriken that have also contributed enormously. Especially Lars Lindgren with his deep macro-economic and societal perspectives that are undeniably presented through his rigorous statistics.

Mikael Stenberg,
Gothenburg, May, 2020

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1

Introduction

The first chapter seeks to give the reader an introduction to the topic of the thesis and why it is important by first giving a background to the current national situation regarding the issues concerned in the thesis. It further declares the purpose and aim of the research as well as research questions, limitations and an introductory description of Egnahemsfabriken.

1.1 Topic background

Integration and housing issues are two prevalent issues that have been permeating the Swedish society and the political debate for years. There is simply not enough of a supply of cheap accommodation to satiate the increasing demand for it. The demand is largely derived from young adults who has to continue to stay with their parents, immigrants that are more or less homeless or without a decent accommodation and older people in an economically difficult spot as they reach retirement (Forma Ditt Hem 2020, Jenny Stenberg). Integration and housing issues are interconnected in many ways. A successful integration can be traced all the way back to the childhood where the opportunities in school are important. The Swedish state's public inquiries (Statens Offentliga Utredningar, SOU 2020:28, En mer likvärdig skola - minskad skolsegregation och förbättrad resurstilldelning, p.20) released a report on how to boost integration and equality by creating a school landscape with more equality in terms of opportunity. The report found that the housing segregation is reflected in the school segregation since parents or guardians tend to choose schools that are in close to their homes. Thus, as long as there is a comprehensive housing segregation, there will also be a school segregation. The report further points out that the Swedish school department has identified an increase in school segregation based on three variables that they have studied: educational level of parents, income level of parents and lastly a socioeconomic index. Thus it is important to find opportunities for housing that are integrated throughout the various socioeconomic areas.

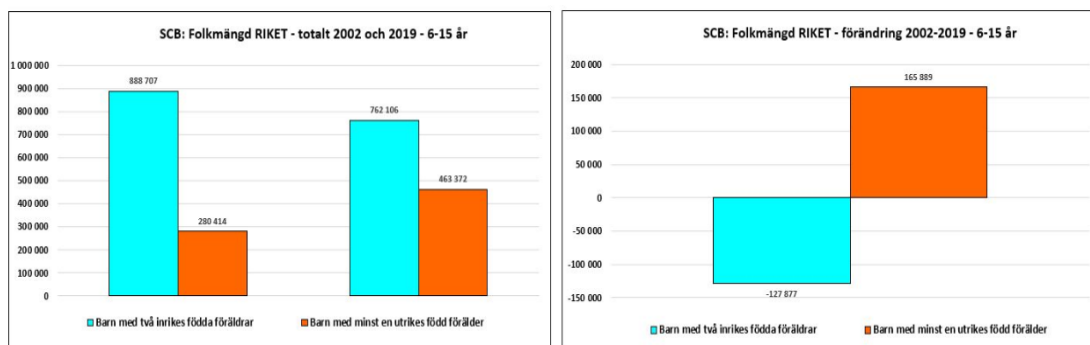


Figure 1.1: Total national population year 2002 and 2019 to the left and population change between 2002-2019, 6-15 year olds, children with two domestic born parents (teal)

compared to children with at least one parent born abroad. Source: Statistics from SCB (Statistiska centralbyrån) and compiled by Lars Lindgren.

The figure above shows that there is an increase in children aged 6-15 years with at least one parent born abroad and a decrease among children in the same age with domestic born parents. There are in general differences in the socioeconomic conditions between people with domestic born parents and those with one or two parents born abroad. Which is why it is important to highlight the change above that will lead to more young adults, in less privileged socioeconomic positions, that are in need of cheap accommodation.

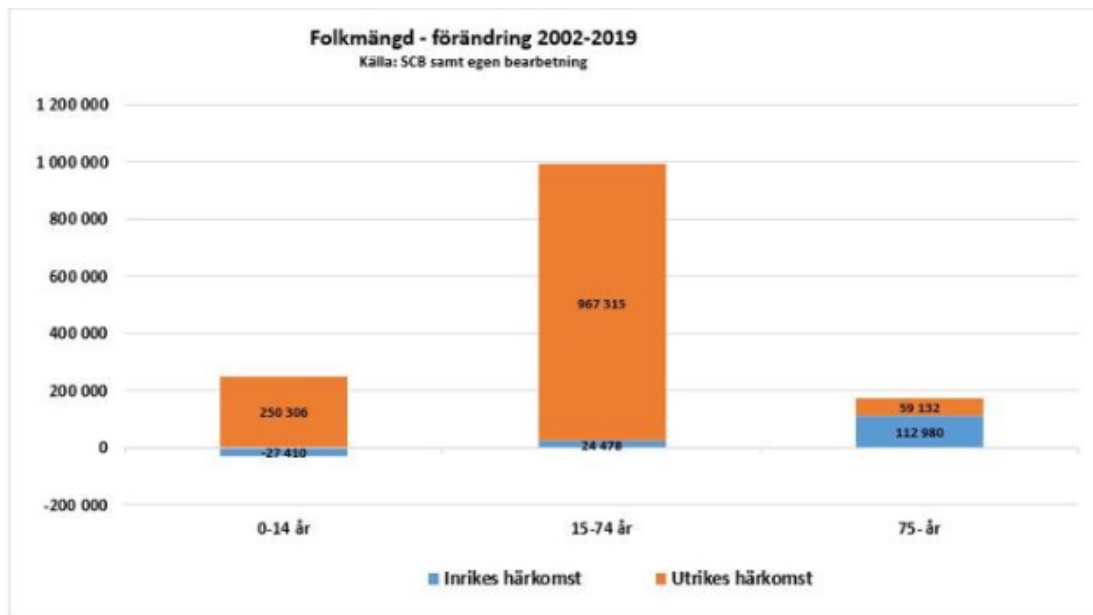


Figure 1.2: Figure showing the change in population between 2002-2019 where the change derived from domestic origin is shown in blue and foreign origin in orange. Source: Statistics from SCB (Statistiska centralbyrån) and compiled by Lars Lindgren.

The chart above takes on a higher timeframe and looks at the driver of our increasing population along with increasing demand on inexpensive accommodation which is derived from an increase in citizens of foreign origin. This population increase could very well help to solve another Swedish issue with is an aging population, and especially as the boomer generation is going into retirement as we speak. However, it would only help to solve any issues if these citizens are integrated into society and are given chances to find a decent job and accommodation. We do not only owe it to these citizens to have a decent life and a chance to prosper but we also owe it to our society to find solutions because eventually, one will not prosper without the other. So how are we doing with integration in terms of work opportunities?

Entreprenörskapsforum has recently released a report looking at integration of foreign born Swedes. The report shows that the subsistence rate among foreign born Swedes from Africa and the middle east are 38% and 36% respectively. In the report they define subsistence with an income of 12 600 SEK per month after taxes and looking at people in working age. The numbers do not take into account if the salary is derived from state subsidised employments (Eklund and Larsson, 2020). The report further states that Sweden, in 2018, had the largest employment gap in all of Europe between domestic and foreign born citizens. Foreign born part of the Swedish population is today almost 20% as African and Asian born people has corresponded to around 50% of the

population increase since year 2000. The report makes it clear that it is crucial to improve integration in Sweden.

These numbers are presented in this topic background to underline the importance of looking at various solutions that will create work opportunities, improve integration as well as help solving our housing issues. As shown above, housing is a crucial part of integration, and how is the supply side of the housing market coping with the rapid change (both in terms of numbers but also in terms housing suitable for less socioeconomic privileged citizens) in demand. Anyone who has personally experienced a rough time with a less than ideal accommodation situation can probably relate to how difficult it is to perform at work or looking for one when a decent place to live is lacking. It relates to Maslow's hierarchy of needs where physiological needs such as air, water, food, shelter, sleep, clothing and reproduction are the foundation and essential before one will focus on safety needs that encompasses employment among other things (McLeod, 2007).

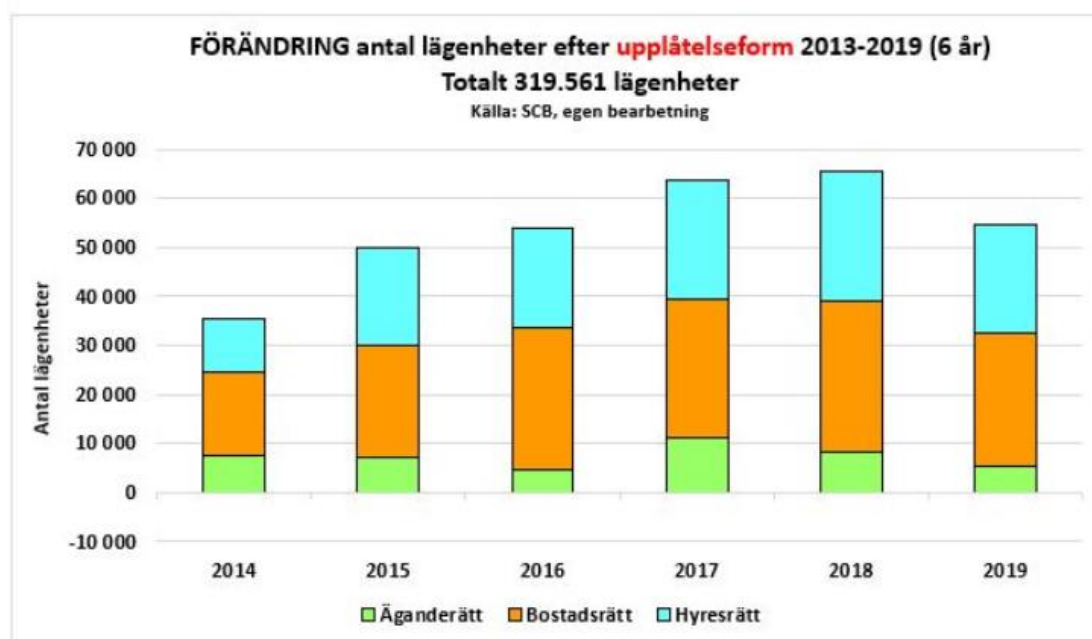
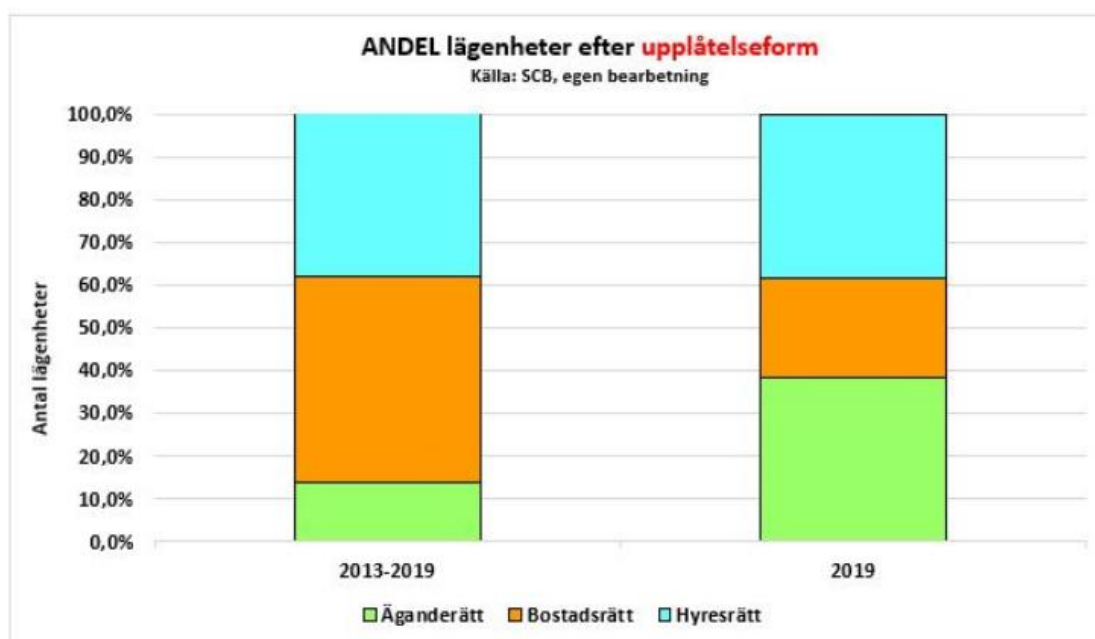


Figure 1.3: Upper table showing proportion of apartments by tenure, comparing the added apartments during 2013-2019 to the total as of 2019. Green represents proprietorship which mainly consists of small houses, orange represents ownership similar to condominium and teal represents rented apartments. Bottom table is showing yearly change in the above mentioned categories. Source: Statistics from SCB (the swedish statistical authority) and compiled by Lars Lindgren.

Of interest to note here on the upper table is that there is no change in the share of rental apartments. There is only a change where the share of small houses has decreased in favor of condominiums. This is despite the change in demand, from a growing group of citizens in need of cheap accommodation. Who does not have the economic means to buy a small house or a condominium. Of note in the bottom table, showing added apartments by tenure and year, is a general decrease in 2019 in comparison to the two previous years. This despite the increasing demand.

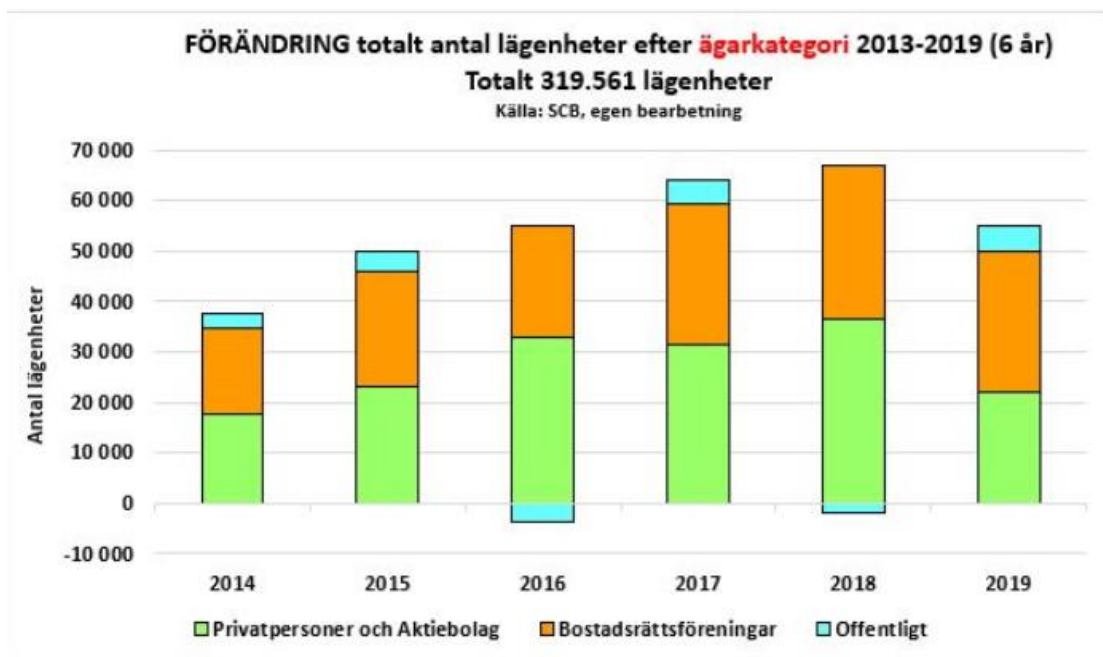
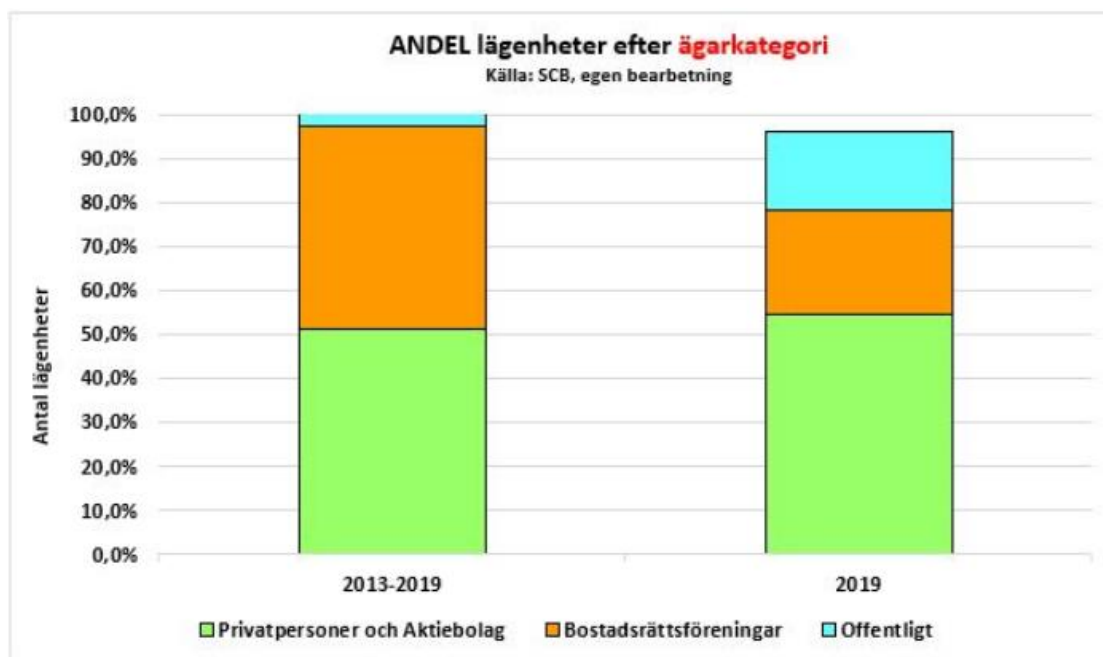


Figure 1.4: Upper table showing who owns the apartments added between 2013-2019 in comparison to the total as of 2019. The green is individual persons and private stock companies, orange is condominium associations and teal is public sector. Source: Statistics from SCB (Swedish statistical authority) and compiled by Lars Lindgren.

Of interest in the upper chart is to see how tiny the public sector ownership is of apartments created between 2013-2019 compared to the total as of 2019. As shown previously, the largest demand growth for housing and apartments is taking place in the most socioeconomically vulnerable groups of society. These groups tend to more often rent apartments from the public sector through charitable municipal housing companies. However, the increase has instead been in condominiums that require a loan from a bank, down payment and permanent employment. In 2016 and 2018 it is shown that there was even a net decrease in public sector apartments.

It is blatantly clear, in the authors very humble opinion, that we are not moving in the right direction in terms of integration or our housing issues. If we continue to slide towards a more segregated society it is obvious that there are numerous other issues, such as violence and other criminality, that will continue to rise as well. However, when coming across Egnahemsfabriken, the author was immediately impressed with how the concept is striving to combine solutions to many of our biggest issues in society (such as social, environmental and economic sustainability, housing and integration) and create synergies between the partial solutions to them. Let us be frank and realise that all these issues are not dealt with one little initiative like Egnahemsfabriken, but it does contribute and may very well have a ripple effect of sorts.

As of this writing, both the IMF (IMF Blog, 2020) and European Commission (Euro News, 2020) has come out warning that we are facing the worst recession since the great depression. The issues described above will, more than ever, need creative and brave solutions going forward. Lastly let us end this first part of a rather spacey thesis with a beautiful quote from none other than Albert Einstein himself (Adriansen and Knudsen, 2013):

“We cannot solve our problems with the same thinking we used when we created them.”

1.2 Purpose and aim

The purpose of this thesis is to identify various areas that can contribute towards furthering Egnahemsfabriken’s goals. Those goals are to primarily help the individuals in society that are the furthest away from having a decent place to live by enabling them to, collectively with a group of people or by themselves, build their own homes. The purpose is also to strive towards integration as well as social, environmental and economic sustainability while taking on the challenges of facing these housing issues. This thesis seeks to evaluate what Egnahemsfabriken have been successful at so far and to identify how it could improve in the future. It is not only directed at the current organisation located on Tjörn, but also seeks to help possible future startups of similar projects in other municipalities. The thesis thus seeks to help possible future startup branches of Egnahemsfabriken or similar projects to avoid pitfalls and thrive with the successful practices of the original organisation.

To begin with, there were hopes of analysing individual projects down to great detail but due to time and resource constraints the author has deemed it more reasonable to let this thesis focus more on the general concept of Egnahemsfabriken and analyse that from an organisational, project management and sustainability standpoint. It is still a rather young organisation with a new concept and it seems appropriate to focus on the wider scope of things before diving into the details, which however could be beneficial for future studies. It is also worthy of mentioning that the author was one of the first self-builder to do a building project on Egnahemsfabriken. The reason for this was a genuine interest in the concept and to furthering its cause. The decision to write this thesis was derived from a belief that the author’s background studying construction engineering and especially international project management, along with the insight into Egnahemsfabriken could give new perspectives that eventually could translate into opportunities.

On a more explicit note, the thesis will firstly present a theoretical framework that has been deemed helpful to further Egnahemsfabriken’s goals. The theoretical framework has been identified from a current state analysis to begin with and later expanded after the investigation of potential improvement areas that were identified through the interviews. The framework will start out by looking at Multi-sided platform business models which is a fascinating and modern business model

that entail opportunities that Egnahemsfabriken could possibly take better advantage of and difficulties that needs to be bridged. The framework will continue towards presenting an overlook of sustainability and dive into drivers towards sustainability, especially corporate social responsibility and socially responsible investments. The reason to add a little bit of meat to this brand of bone is to identify what could attract entities to collaborate and invest in Egnahemsfabriken. The framework will continue with an overview of governance and scaling due to the challenges facing Egnahemsfabriken with how a possible scaling scenario would play out governance-wise. As identified throughout the interviews a hindrance towards having self-builders in the particular target groups comes down to empowerment and inspiring involvement and commitment from people who build for themselves or to help others. Lastly the framework will be wrapped up with a glance at local exchange trading systems and circular business models to add some theoretical meat to the bone of an economic solution that could help initiate more projects at Egnahemsfabriken.

1.3 Research questions

The following research questions have been identified in order to achieve the purpose of the thesis:

1. What factors are preventing Egnahemsfabriken from currently having self-builders or projects running with their intended target group (the most socioeconomically vulnerable people of our society)?
2. How could the target group be empowered and motivated to build their own houses?
3. How can other people, besides the target group, also be engaged to contribute towards a thriving Egnahemsfabriken?

1.4 Project background

This thesis is about a project called Egnahemsfabriken. A way of directly translating the name of the project for non-swedish speakers is “your own home-factory”. Which is basically an attempt of creating a sort of factory where people can build their own little houses. People can access the tools as well as the competence of architects and carpenters and even materials of this so called factory. The idea is to primarily help immigrants and young people who have a very hard time finding accommodation and getting into the housing market due to difficulties to get a loan from banks without a steady income or possibility of making any sizeable down payment. At the same time we have a lot of people who are retired, or about to become, who are struggling economically to keep living in their houses. The idea is basically to try to create a synergy by combining these two huge problems that our society is facing while at the same time also creating a platform for integration, coherence and collaboration which the author believes to be another dire need of our society today. However, grand problems often need grand solutions and this is no exception. Egnahemsfabriken have caught quite a bit of traction during its rather short lifetime but have still not really managed to break through the financial barriers that the self-builders are facing in the primary target groups. This master thesis seeks to evaluate possible solutions to these various barriers.

The solution is not fixed, because every situation will need its own tweaks to suit each individual case. In some cases a retired person could let an immigrant or young person build a house on their plot and in return the person gets to stay there for an amount of time instead of getting paid for the time spent building. Other cases could be an old person selling a piece of their plot or paying the young person for the time spent building a house on their plot. Lots of retired people are also craving stuff to activate themselves with, they might even want to build their own home on their plot in order to sell the new or old house and decrease their debt. It also just so happens that old

people and young people along with immigrants complement each other in a rather spectacular way, especially if paired together from a larger pool of each category. Older people often have knowledge and experience overall how the system works and how to navigate around things like building permits and other necessities. Building a house is hard work and not perhaps what all old people are looking to occupy themselves with. However that is often something that young people and immigrants are rather keen or capable of. The monetary issues that young people and immigrants are often facing could in some cases perhaps be decreased in combination with the different economic issues that older people are facing.

One thing that is a big issue for retired people is that the zero or even negative rates are making it very hard to afford or maintain a decent lifestyle. If you choose to have “defensive” and “safe” investments (which a very large amount of current and soon to become retired people do for obvious reasons) you often end up with a large amount of interest rate based investments that have historically low yields (sometimes even negative!). At the same time the mortgages they have are surely not with negative rates. A way of improving the yield of such “defensive” investments while at the same time contributing to a solution to the monetary issues that retirees are facing due to low yields is to have a fund which enables young people or immigrants to make the investments needed to buy a piece of land and build a house. As the loan taker is successively paying back the money (plus interest) lend from the fund, the ownership of the house and land is transferred from the fund to the individual. The people seeking a safe investment will have an investment that is yielding interest and is backed by land and houses that are built with the help from Egnahemsfabriken. Egnahemsfabriken would also help to ensure that the houses are built in a sound way and with low cost (good value for money) which will ultimately make the fund even more of a safe investment, backed by tangible assets which people seem to be interested in, especially since the world is looking to enter another recession due to corona. It is also hugely helpful that Egnahemsfabriken is an appreciated initiative that is getting lots of support from various instances. For example, there are lots of possibilities to build with very cheap recycled materials that have been donated and the only price you pay for building with such materials is a small contribution to the management of the materials (there is a small cost retrieving, storing and indexing materials to make use of them in an orderly fashion). There are also various construction businesses who contribute to EHF by offering discounts on goods and services. The collective fund described above is not something that Egnahemsfabriken are currently doing but it has been investigated in a report by Egnahemsfabriken in collaboration with Swedish Research Institute (RISE) and will be further explained later in the thesis.

The author of this thesis happened to live for a while in a community in New Zealand where a similar initiative existed. Their idea was (among other things) to have a savings pool which is basically doing a very similar thing to what was described above, but it is an interest free loan and thus does not yield anything for the lender. Instead, when the loan is repaid, the borrower has to contribute the same amount for the same time to the savings pool that was originally borrowed (thus creating reciprocity). After that time, the person is free to either take out or leave the money in the pool. The crux of this idea is that you need initial money in the pool that will not yield anything. Therefore, it is difficult to get started which is why having a yield-based fund to start with instead of a savings pool might be more interesting unless large philanthropic capital is attracted.

Egnahemsfabriken are also striving towards growing food and they have project initiatives that are also striving to appeal female immigrants more than house building might do. They run a café that in the future is meant to produce locally grown and baked food to a reasonable price in order to create opportunities to meet people and integrate in a community that is helping immigrants learn swedish and get closer to working opportunities.

1.5 Limitations

The initial idea from the author was to be able to go into more detail in just about any area of the thesis. There have however, due to natural constraints in terms of time and resources, been necessary to leave some parts out of the thesis. Something that had to be left out was various economic feasibility calculations on possible building projects. Since there are so many variables to building your own home it would be more suitable to first have more of an overview into the Egnahemsfabriken concept and from there identify further studies that can be made in greater detail. The thesis has also been carried out during extraordinary times due to Covid-19. It has thus been difficult to execute interviews in a timely manner, especially with intended interviewees that are not comfortable with the technological possibilities our current era presents us with. The thesis is therefore lacking in number of interviews, however the ones performed were extensive and took several hours to get as thorough understanding as possible of Egnahemsfabriken or the subjects at hand. Risk due to the limited number of interviewees were attempted to be mitigated by continuing to perform interviews, especially about the concept of Egnahemsfabriken, until the new information did not deviate much from the previously obtained information.

2

Theoretical Framework

The second chapter will induce a comprehensive theoretical package that, in its various ways, could be meaningful to consider for Egnahemsfabriken as an organisation. In some cases, the theoretical topics are chosen due to the current state of Egnahemsfabriken and in other cases with regards to potential future benefits that might lie within. To begin with we will have a look at multi-sided platform business models before moving on to various facets of sustainability and why one would want to incorporate or invest in it. Lastly, the theoretical framework will incorporate governance and scaling as well as a local view which takes into account a brief glance at local exchange trading systems and circular business models.

2.1 Multi-sided Platform business models

Companies with multi-sided platform (MSP) business models have always been around in one way or another, but has literally exploded together with the internet revolution over the last few decades (Eckhardt et al., 2018). MSPs can be defined as “technologies, products or services that create value primarily by enabling direct interactions between two or more customer or participant groups” (Hagiu, 2013). MSPs can be seen more as facilitators or platform providers, as opposed to companies with a more traditional business model. MSP companies include Google, Amazon, Facebook, eBay, Alibaba, LinkedIn, Uber, Airbnb, PayPal, Microsoft, Apple just to mention a few of the giants that have completely changed their respective fields. Some of them are full blown MSPs such as Uber that connect drivers and passengers. Ebay, Amazon and Alibaba connect buyers and sellers. Airbnb connect dwelling owners and renters. Other companies have aspects or parts of the business model that can be categorized as MSPs, including Apple, Google and Microsoft who have application or game developers and users that they connect through their platforms.

Rank	Company name	Location	Sector	31 March 2019		31 March 2018	
				Rank +/-	Market capitalisation (\$bn)	Rank	Market capitalisation (\$bn)
1	Microsoft	United States	Technology	2	905	3	703
2	Apple	United States	Technology	-1	896	1	851
3	Amazon.com	United States	Consumer Services	1	875	4	701
4	Alphabet	United States	Technology	-2	817	2	719
5	Berkshire Hathaway	United States	Financials	1	494	6	492
6	Facebook	United States	Technology	2	476	8	464
7	Alibaba	Greater China	Consumer Services	0	472	7	470
8	Tencent	Greater China	Technology	-3	438	5	496
9	Johnson & Johnson	United States	Healthcare	1	372	10	344
10	Exxon Mobil	United States	Oil & Gas	2	342	12	316
11	JP Morgan Chase & Co	United States	Financials	-2	331	9	375
12	Visa	United States	Financials	8	314	20	246
13	Nestle	Switzerland	Consumer Goods	6	292	19	246
14	ICBC	Greater China	Financials	-3	287	11	336
15	Walmart	United States	Consumer Services	1	280	16	264
16	Bank of America	United States	Financials	-3	266	13	307
17	Procter & Gamble	United States	Consumer Goods	17	260	34	200
18	Royal Dutch Shell	United Kingdom	Oil & Gas	-3	256	15	263
19	Novartis	Switzerland	Healthcare	8	245	27	211
20	Verizon Communications	United States	Telecommunications	16	244	36	197

Source: Bloomberg with PwC analysis

Figure 2.1: Above is a list of the largest public companies by market capitalisation. (Source: Bloomberg).

It is of interest to note that out of the top 8 companies in the list above, 7 can be considered as having MSP business models. The only company in the top 8 that does not have a MSP is Berkshire Hathaway that on the other hand can attribute a large part of its success to Apple which does prosper from its MSP nature. The success of MSP business models becomes even more evident when you take into consideration that these top companies are in many cases not very old in comparison to the companies following on the list who are in many cases founded over 100 years ago. Microsoft (1975), Apple (1976), Amazon (1994), Alphabet (1998), Facebook (2004), Alibaba (1999), Tencent (1998) have all ridden on the new era of the internet to become the biggest companies in the world, and the MSP business model has suited them very well in that.

The idea of Egnahemsfabriken is of course not to become one of the biggest companies in the world, but this serves merely to point out the huge potential that lies in the MSP business model in the era of the internet. However, as Hagi (2013) points out there is in general a quite high barrier of entry as there is an inherent chicken-and-egg issue since neither side is willing to enter without the other. Take Amazon as an example, if there are no users purchasing products, there are no interest from vendors either. This barrier to entry is a big reason why these giants tend to not have that much competition getting through and in some cases even end up with almost a monopoly-like position if they actually make it. Evans (2008) notes that the ones cracking the chicken and egg problem tend to be “winner-take-most” or “few winners take all” due to effects of indirect network effects and scale economies. However, as Van Alstyne and Parker (2017) notes: “For every successful platform, there are many more that struggle or simply don't make it”.

Businesses can create value in different ways, mainly businesses create value through either (Zhao, von Delft et al, 2019):

1. Product features that deliver customer benefits.
2. Product features (co-developed with a network of suppliers) that deliver customer benefits.
3. Enabling and facilitating transactions.

Or as Evans (2008) points out regarding two-sided platforms' main functions:

- They are matchmakers who facilitate exchange by making it easier for members of different groups to find each other.

- They build audiences in order to increase the likelihood that members of one group will find a suitable match.
- They provide various resources that can be shared in order to reduce the cost of providing services to both groups of customers.

Evans (2008) points out how a two-sided platform can be especially vulnerable to a three-sided platform since the latter can derive its profits from two of its sides to fund a heavily subsidized third. The old saying that goes “there's no such thing as a free lunch” is quite applicable to MSPs in general actually. The saying is usually associated to renowned economist Milton Friedman who wrote a book by that title. The quote came about as it was popular for saloons back in the 1940's to advertise free lunches. However, one had to buy the beverage first in order to enjoy the free lunch, thus the saying that there's no such thing as a free lunch. As we enjoy a free browser, email or word processor the company is basically investing in eyeballs that they can make money on advertisements as well as use and sell the data that is being gathered. In general it could be said that if you are not paying for it, you're not the customer; you're the product being sold.

Hagiu (2013) outlines four major strategic challenges to success:

1. **How many sides to bring on board.** More sides generally bring about bigger cross-side network effects and potential diversification of revenue. However having more sides might bring about complexity and conflicts of interest. It could also decrease innovation since there are more sides to please.
2. **Platform design.** Since the platform can include an incredible amount of features when it comes to searching, transactions and product development. Deciding what features and functionalities can be made by cost-benefit analysis whereas if the cost of building and implementing the features are less than the created value for the various sides, then they should be included.
3. **Pricing structures.** MSPs potentially have multiple revenue and profit sources, most MSPs however offer their services for free or at subsidized prices to one side in order to profit all the more from the other. For example Facebook does not charge individual users to use their platform but can instead charge all the more for companies to advertise or buy their data.
4. **Governance rules.** The fourth strategic challenge that Hagiu's research (2013) points is with regards to the governance rules that can fall into two main categories. First, who is allowed to join the platform? And the second one concerns the interactions, what are the various sides allowed to do? An example of differing governance rules is Apple's two-sided iOS application platform which is very tightly governed in comparison to Google's three-sided Android platform.

To sum up the theory behind MSPs a little bit; they like that bicycle kick going crossbar and in. There are many attempts for every successful one but when they are successful they tend to be rather spectacular.

2.2 Sustainability

Firstly it is important to note that this idea primarily seeks to contributing towards environmental, social and economic sustainability. In order to point out how that is achieved one would have to take a look at what sustainability in these various fields actually are.

Littig and Griessler (2005) claims social sustainability to be a catchword between political pragmatism and social theory while others define it as “the continued satisfaction of basic human

needs – food, water, shelter – as well as higher-level social and cultural necessities such as security, freedom, education, employment and recreation” (Brown, Hanson, Liverman, Merideth, 1987). If we look at the slightly more modern and less Maslow-inspired definitions, Dyllick and Hockers (2002) defines corporate social sustainability as “Socially sustainable companies add value to the communities within which they operate by increasing the human capital of individual partners as well as furthering the societal capital of these communities. They manage social capital in such a way that stakeholders can understand its motivations and can broadly agree with the company’s value system”.

Goodland and Daly (1996) keep their definition of economic sustainability as short and concise as their definition of environmental sustainability; “maintenance of capital”. Since the picture that is painted up by that definition does not seem to be complete, we will also look at another common definition of economic sustainability; “the ability of an economy to support a defined level of economic production indefinitely” (Woolcock, 2011).

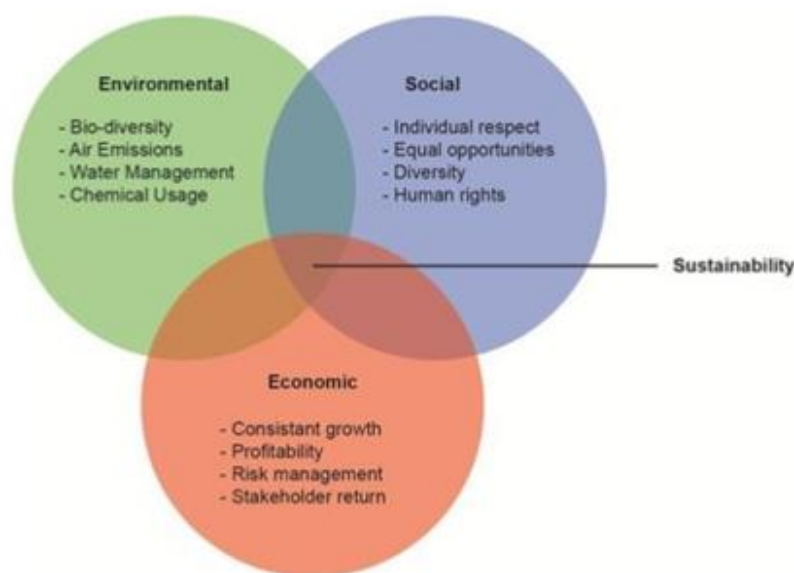


Figure 2.2: Spheres of Sustainability. Source: (Rodriguez, 2002).

2.2.1 Drivers, benefits and approaches to incorporate sustainability

The drivers to incorporate sustainability that organisations and therefore projects can be divided into two different categories:

1. Sustainability in the forms of practices that the organisations *have* to incorporate and
2. Sustainability that the organisations *want* to incorporate

In the first case, organisations are forced by laws, legislations and other forms of pressure from governments to adopt sustainability. There are many different kinds of such practices that organisations have to adopt. Paying taxes is one example that goes for all industries, organisations and therefore also projects have to pay tax on their profits. The tax is therefore an example of a counterbalancing measure to what Meadows et al (2004) describes as the positive feedback loop where the privileged are systematically rewarded on account of the less privileged (Meadows, D., Randers, J., & Meadows, D., 2004). The money that is collected through tax is primarily benefiting

the social sustainability by giving people free or cheaper welfare in its various kinds. Tax could also benefit environmental sustainability through increased prices on types of fuels that strains the environmental and economic sustainability through keeping the economic system alive by paying interest on national debt.

The very great majority of organisations are however run with increased profitability as their primary, if not only, objective (non-government organisations excluded). The meaning of this quite obvious statement is that the second category mentioned above consists of sustainable practices that projects *want* to adopt due to the fact that they are assessed or anticipated to be *profitable*.

2.2.2 Corporate Social Responsibility and Corporate Sustainability

Corporate social responsibility (CSR) is primarily used to describe the practices that a company has embedded in its business model for verifying their compliance with the law, ethics standards and international norms (Wood, 1991). In some cases the organisations have the ambition of their CSR to go beyond compliance with actions that are improving the social circumstances at the workplace even though the organisation is not directly benefiting from it or is required to do so by the law (McWilliams and Siegel, 2001). When the organisations' CSR goes beyond compliance it is primarily done so to create goodwill towards existing or potential clienteles or employees.

2.2.3 Socially responsible investments

According to a study on socially responsible investment (SRI) Jansson and Biel (2011) concluded that the motives for investments vary between the three groups of their study. Private and institutional investors were found to be guided more by self-transcendent values such as environmental and social sustainability which was not the case for fund managers running these investment institutions. Private investors focused more on long-term returns while institutional investors focused on reducing financial risks.

Juravle and Lewis (2009) conducted a study trying to identify beneficial strategies to approach and persuade institutional investors (such as pension funds) to invest in sustainable investments (SI). They found four tactics that have been successfully employed by pioneers to "sell" SI to institutions which are: "making the business case for SI; forming internal coalitions with mainstream investment professionals; industry networking; gaining credible expertise."

Lützkendorf and Lorenz (2005) argues that by simultaneously considering economic, environmental and social issues simultaneously when evaluating property characteristics and performance can lead to a more robust assessment approach along with better reliability of assessment results. They also point out synergies between sustainable design and risk management for parties lending and insurance parties.

2.3 Governance and Scaling

Why then, do organizations tend to become more and more traditional in their management as they scale in size? Paul Graham explains it quite well in his essay "You Weren't Meant to Have a Boss". He argues that the unnatural thing about working for big companies is that humans simply weren't meant (by evolution) to work in large groups. As a company grows, it has to divide itself into groups that are small enough to manage and work together. Bosses are then introduced in order to coordinate the different units or groups. These groups always tend to be arranged in some kind of tree structure with each group's boss being the connection to the tree.

What happens when a group is only connected to the tree through its boss is simply that “each person gets freedom of action in inverse proportion to the size of the entire tree”, as Graham puts it. Why? Well imagine that you are working in a group of 10 persons. This group is then connected to the company tree through the group’s boss who is representing your group in the manager group that is one level above yours. The group of bosses would then not simply be a group of individuals working together but instead a group of groups. If the group of managers would be able to work together as a group of individuals, each group they manage would have to work as if they were a single person. As the tree grows vertically, the freedom of action for individuals is quickly limited. Restricting the freedom of action is not a big issue for most companies because they are not that interested in having and implementing new ideas. However, if people's ideas are not implemented or barely even considered, people stop having ideas. This is what usually happens when companies grow in size, and the usual response is not to improve the organisation but rather to buy the innovation through acquisitions of smaller companies where this hasn't happened yet.

We are currently leaving the industrial age which was brought to us by the industrial revolution that took us forward from the agricultural age. If you call this new age the digital age, the information age, the intelligent age or something completely different does not matter. Things are always changing; it is only the pace of change that varies. The important thing is that things will not be the same as we grew used to during the industrial age, and whether it is schools, companies or governments, the ones who fail to transform from the industrial age will soon enough realize that they are equipped to deal with a world that no longer exists.

Since our basic human nature restricts the possible size of a group that can work together, the alternative to the tree structure would then be to have no structure at all according to Graham. To have each group completely independent, working with each other the same way a market economy does.

According to Cronin, K. A. et al. (2015) hierarchy is detrimental for human cooperation.[1] Given that hierarchy can be defined as priority of access to resources and the probability of winning competitive encounters, Cronin et al. has cleverly found a way of studying this by comparing cooperative success in the presence of hierarchy (with both earned and arbitrarily assigned ranks) to success in conditions when hierarchy is absent. The study found out that cooperation was less likely in the case of hierarchy (no matter if it was earned or random) than it was in the control condition which was without any hierarchy. The same pattern is also shown to exist among our nonhuman primate relatives. The study also showed that lower ranked individuals decreased their cooperation as the experiment proceeded and lastly that higher ranked individuals obtained more resources on the expense of lower ranked individuals.

The study makes one think of the views upon governance that Goethe and Jefferson had:

“To rule is easy, to govern difficult.” – Johann Wolfgang von Goethe

“Which government is the best? The one that teaches us to govern ourselves.” – Johann Wolfgang von Goethe

“Whenever people are well-informed, they can be trusted with their own government.” – Thomas Jefferson

2.4 Involvement and Commitment

Why, How and What is a model used by Simon Sinek to further goals and increase motivation among organisations, projects and down to individuals.

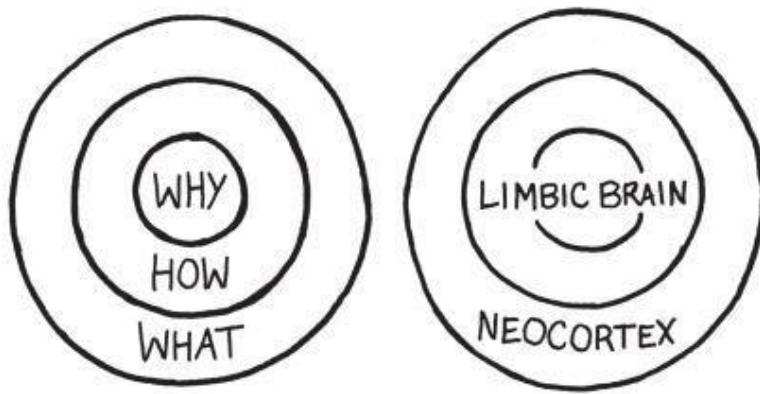


Figure 1.3:The Golden Circle. Source: (Source: Sinek, 2017).

According to Simon Sinek an important thing to discover in any endeavor is your “why”. What Sinek et al. (2017) propagates is for organizations and individuals to start out with finding their “Why”. Sinek explains that most of us know what we do (products we sell, services we offer and jobs we do). Some people know how we do these things (the things we do different in order to stand out from the crowds in order for people to specifically want to buy our particular product or service). Very few people however knows why we do what we do. The figure above shows what he calls the Golden Circle with the “Why” and “How” corresponding to the limbic part of the brain and the “What” corresponding to the neocortex. The important difference here is that the neocortex is the part of the brain that is representing rational and analytical thought. It helps us understand facts, figures, features, and is also responsible for language. Hence these things are immensely more easy for us to put into words and explain in comparison to the “How” and “Why”. The limbic system is located in the middle section of the brain and is responsible for our behaviour and decision making. It is also responsible for our feelings, our trust and our loyalty. And unlike the neocortex this part of the brain has no capacity for language. Hence the expression “gut feeling” that is a feeling we have about a decision we need to make that we can not quite explain.

2.5 Local Exchange Traded Systems

Local Exchange Trading Systems (LETS) is social phenomenon which strives to constitute a more ecologically rational and socially inclusive form of economic activity. It is basically a system for exchange of services and goods without the use of formal, legal tender. LETS members their own local currency to buy and sell instead of traditional barter (Barry White et al. 2000). It is held that since LETS tend to represent and create new forms of work, it thus contributes to reducing unemployment (Peacock, 2000). Having such systems in place could potentially trigger massive local economic multiplications due to cultural innovation. It is however primarily through cultural rather than technological innovation that the development primarily shows itself. LETS further show to act as seedbeds for new skills and practices that in turn spreads towards wider social and economic networks (O'Doherty, R. K., Dürschmidt, J, et al. 1999).

2.6 Circular Business Model

Circle economic systems focus on reusability of products and raw materials with a strong focus especially on reducing value destruction in the system as a whole. It further seeks to achieve value creation within each tier of the system, where ecological and social factors are taken into account to form the business’ overall culture and philosophy (Kok, L., Wurpel, G. et al., 2013). Sempels,

C., & Hoffmann, J. (2013) points out that corporate strategy is primarily responsible for the management and value creation. Sustainable development is thus inherently linked to the strategy. Sustainable development strives to promote openness and responsibility towards stakeholders, external as well as internal to the organisation. As the goal of the strategy is to satisfy stakeholders, sustainable development comes natural to the circular business model as it tends to incorporate a wider inclusion in its regard towards stakeholders.

3

Method

In this chapter we will have a look at what method was used while carrying out the research. Since the topic is a bit unusual as well as the research method since the primary approach have been a participatory action research that in turn was complemented with a qualitative research that was carried out through semi-structured and unstructured interviews.

3.1 Research Strategy and Design

The research of the thesis has been conducted to probe into the various fields of the concept and business case of Egnahemsfabriken. In order to find solutions how Egnahemsfabriken can scale up and more effectively accomplish its goals of helping those furthest away from the housing market or in generally tough economic positions (immigrants, young and old people) to build their own basic houses. It has therefore been necessary to look into many different aspects of Egnahemsfabriken and people who more or less directly have been involved so far and those that potentially could be involved in the future to further its case.

Since this study seeks to probe into possible solutions to issues that Egnahemsfabriken are facing and is more focused about words than numbers it has been suitable to use a qualitative research approach (Bryman and Bell, 2011). The interviews have been conducted with a semi-structured or unstructured format that has varied greatly depending on the interviewee's experience and expertise. Along with the interview research there has along the project been identified various theoretical fields that the author of this thesis has found relevant to further the success of Egnahemsfabriken. Bryman and Bell (2011) as well as Hyde (2000) makes the distinction between inductive and deductive research strategy. This thesis is using an inductive research strategy since it begins with a research question that is derived from general knowledge about the case of Egnahemsfabriken and empirical data is gathered and studied in relation to existing theory in order to generate a hypothesis of how the issues surrounding the research questions could be solved. Case studies are particularly suitable for in-depth understanding of a specific issue (Noor, 2008). Bryman and Bell (2011) further notes that case studies are appropriate to conduct with a qualitative research strategy in order to make an intensive analysis of the subject matter. Dubois and Gadde (2002) argue that case studies can provide researchers with a unique possibility to develop theories and hypotheses based on empirical phenomena and their contexts.

There is a touch of activism in the participatory action research that is permeating the method of this study. Due to the fact that the author first participated in a building circle course held by Egnahemsfabriken during the spring semester of 2019 and later in the autumn continued to become the first self-builder at Egnahemsfabriken. The author later abandoned the plans to build a house that was designed during the spring but instead conducted a project to transform a van into a

recreational vehicle. Reason and Bradbury (2001) provides a reasonable definition of action research as: “Action research is an interactive inquiry process that balances problem-solving actions implemented in a collaborative context with data-driven collaborative analysis or research to understand underlying causes enabling future predictions about personal and organizational change”. During this time the author was continuously gathering information that eventually led the author to initiate this research in the beginning of 2020 due to the belief that it could contribute to Egnahemsfabriken, and of course because there was a belief that Egnahemsfabriken are doing something that could be truly great for society and thus is worthy to contribute towards. Participatory research focuses primarily on community groups and is characterised by participation from community members, consciousness-raising and education of participants, inclusion of popular knowledge and political action (Cancian, 1996).

3.2 Research Process

The author of this thesis has been involved in a “building circle” course previously at Egnahemsfabriken where participants of the course had help by various experts such as architects and carpenters. The experience and insights gathered both from designing and building, but also from the people and the organisation in general, while participating in this course gave the author of this thesis an idea as of what people to interview and how to formulate a topic for this thesis that would hopefully help further Egnahemsfabriken’s goals.

The research process can be divided into four phases:

1. **Current state analysis** served to get an overview of what Egnahemsfabriken are doing, what they are trying to achieve what challenges they are facing. This phase was largely helped by the author’s experience and insights into Egnahemsfabriken. It was accompanied by a general study of literature and theories that could possibly be applicable to the particular case. During this phase the author spent an approximate three days or evenings on Egnahemsfabriken building and the information casually picked up during conversations with various people working, visiting or in other ways involved in the organisation led to a general idea of useful areas to explore.
2. **Empirical investigation** into possible improvement areas of the organisation. The second phase was mainly consisting of extensive interviews with various stakeholders involved in Egnahemsfabriken. The interviews were in most cases semi-structured and centered around areas that had been identified in the first phase. They were followed by shorter interviews of experts in particular areas that could be areas where Egnahemsfabriken strived towards.
3. **Academic inputs** was the third phase in which the study identified academic work that could potentially improve Egnahemsfabriken.
4. **Conclusion and recommendations** was the last part in which the theoretical research was combined with the case of Egnahemsfabriken in an attempt to give tangible solutions to the various challenges faced.

3.3 Data Collection and Interviewees

The founders of Egnahemsfabriken were originally Tinna Harling and Erik Berg. They are both architects but have experience of interests that still diversify their expertise quite a bit. Tinna has many years of experience working in the public sector with housing and funding related issues. Erik on the other hand has experience from designing from working in an architecture firm but also from multiple charitable organisations directed towards involving the civil society in issues related to the sustainability and the housing crisis. As the founders of Egnahemsfabriken they were interviewed to bring insight into what is required to start up a project like this, what decisions they

had been taking that they were content with and what things they thought they could have done better. The focus was to identify what is required to scale up Egnahemsfabriken and start something similar to the initiative instigated on Tjörn somewhere else in Sweden. They were also interviewed to identify areas where the initiative on Tjörn could develop further.

Christian Rubell is the site manager of Egnahemsfabriken on Tjörn. He is a well experienced carpenter and is also educated within the field of building preservation. He was interviewed mainly to get further insights in the daily operations of the business. Challenges faced in regards to that and what could have been done differently and what have been done well.

Jenny Stenberg is a board member of Egnahemsfabriken with lots of insight into the organisation and is also responsible for research in the project on behalf of Chalmers University. She was interviewed mainly to get further understanding of Egnahemsfabriken from an academical point of view. She has many years of experience from researching or supervising research of Egnahemsfabriken and similar areas.

Niklas Wennberg is another boardmember of Egnahemsfabriken who has lectured on Chalmers and Ekocentrum in Gothenburg. Primarily he is a successful pioneer in sustainability projects ranging from urban aquaponics and vertical farming through his project Stadsjord to urban pig farms. Niklas is a colourful personality with lots of knowledge and competence within sustainability and entrepreneurship. The interview circled mainly about how aquaponics, pig farming and cultivation could be used to further the business case of Egnahemsfabriken.

The tax authorities of the Swedish government were interviewed in order to get further understanding of the rules that would apply if Egnahemsfabriken would develop its business case to incorporate possibilities to generate an income through sales of for example food for self builders without any current income. Also to see how it would work if there are exchanges of favors, such as helping out with a building project.

Lars Lindgren has 40 years of experience with economic analysis with focus on statistics. He provided the charts in the topic background that are based on statistics from SCB's numbers (Statistiska Central Byrån), along with his view of how the statistics could be interpreted. Although he is conservative to draw many conclusions and prefer the statistics to speak for itself.

General conversations with potential self-builders, employed personnel at Egnahemsfabriken, visitors and other contributors were also held to get further understanding and perspectives. Despite the great contributions from the interviewees mentioned above in the formal interviews, this was however the most important part of the research. The casual and general conversations were in general of an unstructured nature. They served provided much insight into the organisation and was the primary benefit from the participatory action research that was conducted.

4

Empirical Findings

The focus in this chapter lies primarily in pointing out the most relevant findings from the semi structured interviews. The points brought up in these following pages were in many cases highlighted not only by the interviewees but also through the participatory action research which gave further interest to include them in the study. The chapter will start out by looking at what has made Egnahemsfabriken possible, followed by what is needed going forward. The focus will then be how Egnahemsfabriken can further expand and further it's goals and why it is important.

4.1 What has made Egnahemsfabriken possible

Starting out with what has made it possible for Egnahemsfabriken to be initiated and continuously grow for each year that has passed. What is identified among all interviewees involved with Egnahemsfabriken is that there has been deeply passionate commitment from many individuals that has taken it to where it is today. There are many enthusiasts that can be identified but the two foremost are Erik and Tinna who has put in a countless numbers of voluntary hours into the project. Also many others have volunteered their time and efforts into Egnahemsfabriken and it is important to note this time consuming contribution that has been absolutely essential if one is to consider starting something similar up in another region. It is further important to note that this passionate commitment is derived from the civil society with a wide range of individuals with various experience and expertise.

Erik Berg explains: “most importantly it was born out of a locally anchored context in the civil society. There was a urgent need from the municipality and society in general to find solutions to these issues (author’s note: housing and integration). Egnahemsfabriken has grown to have a revenue of approximately 2,5 million SEK but the important thing is to see the social capital that has been raised instead of just staring blindly at the money. Engagement feeds into more engagement. It is important to note that social capital can not be raised and stored at the bank. It has to continuously be rewarding, fun, stimulating and meaningful. It will simply not work any more if the passionate engagement of the core group is extinguished.”

Jenny also underlines the importance of the passion of the core group of Egnahemsfabriken as the single most important factor and further explains the situation: “There is an incredible amount of passion and the core group puts down a lot of their spare time into the organisation. There is a lot of flexibility and positivity, otherwise this would not have worked, but it can also mean that the workload has been too big.”

The site manager Christian sees lots of benefits with the multifaceted and enthusiastic group of people working with Egnahemsfabriken where he mentions numerous people not only voluntarily working for the organisation but also people donating tools, materials and machinery. Mostly it is some kind of friendly connection to someone involved in Egnahemsfabriken that leads people to donate things. At other times it can be companies that have somehow heard about Egnahemsfabriken and are donating windows and other materials before a building is to be demolished or renovated. Nowadays there is a quite impressive stack of windows, doors and other recyclable building materials that can be used and purchased for a cheap price by self-builders. In general it is easy to note that there are a lot of benefits that are derived from a contagious willingness to help. Christian further explains that he sees many benefits with the organisation having two different focuses at this early stage, where one is to build houses for purchasers and the other is of a more socially charitable character. In the first case Christian together with two newly arrived immigrants from Syria has been building *Attefallshus** or smaller houses for mostly retired purchasers. This part contributes to economic resilience and provides a stable flow of money into the organisation and can cover running costs such as capital and rent. It is also great for Egnahemsfabriken to continuously build houses and improve on that, especially for the newly arrived immigrants employed that do not have much experience. In the latter case Egnahemsfabriken are hosting various integration and sustainability events, social building meetups and enabling self-builders. This part is so far more dependent on continuously getting various grants.

4.2 What is needed going forward

Jenny explains: “External funds are needed for another five to ten years, because the Swedish societal structures are currently not supporting these initiatives. As an example we can look at Germany where the banks have changed their fundamental loan structures. Community initiated construction projects have increased in reputation when evaluated whether to have a loan or not, because in these cases you know you have a demand. As opposed to speculative construction projects that have a very real risk of not being sold, as in the case with the famous *Karlatornet* in Gothenburg.

Erik identifies two keys if Egnahemsfabriken is to scale up and make it possible for more people to build their own homes. Firstly, finding financial solutions, primarily on an individual basis. Secondly there is a dire need of solving the issues with finding cheap land to build on. Erik is together with Tjörn municipality currently looking into making a piece of land into approximately 20 small plots (70-80 square metres each) with opportunity for a long term lease of up to 50-100 years. Historically there has always been a cheap cost of leasing land or a little plot but now they are often not available to the individual any more. However the concept would remove a huge initial obstacle in the target group's strive to get their own first proper home. Erik sees that it would be impossible to scale it up into a workable concept without having the municipalities on board in similar ways as the proposed concept above. Municipalities' development and exploitations departments have their demands to face that they need to contribute to the municipalities' economy. Erik means that the people in need of these kinds of solutions are not quite what the municipalities are primarily trying to attract. He further stresses that the concept of building your own little house with social methods is not meant to replace the conventional existing structures that are in place but merely to complement them. It is also important to note that these social construction methods are not new but it is rather about reviving old ways of solving housing issues that were popular between 1927-1984, according to Jenny. The movement died out mostly due to

lack of time because people got employed on a wider basis, now we however have a large amount of people in working age that are unemployed and in need of a place to stay.

Once the obstacle with finding a cheap plot to build on is dealt with we can look at the second key which is finding solutions for financing the actual building. Erik and Tinna has together with Research Institutes of Sweden (RISE) brought forward a comprehensive report for how it could be possible to scale up Egnahemsfabriken. One chapter is about financing where they make a compelling case for how social impact investing could bring about opportunities for self builders without any funds. The idea is built upon the foundation that there is an identified interest for impact investing and particularly social impact investing and by creating a social bond where the financial dividend is reduced in favor of realising social values. By mixing philanthropic capital with traditional capital, where the former is functioning as a security for the latter, it would be possible to decrease the risk for commercial capital and thus decrease the demand for dividend on their investment. Also the buildings produced at Egnahemsfabriken serves as a security for the bond.

A ten year social bond could then, according to the report, provide the financial means to scale up Egnahemsfabriken. It could also be used to enter project agreements with self builders or households that either become owners of or rent buildings developed by social building methods initiated by Egnahemsfabriken. An example of a social building method could be that Egnahemsfabriken sets up a temporary project factory at the site of the leased land mentioned above. In that case they could then build 20 small houses in collaboration with the people who will stay there, 3-6 employees from Egnahemsfabriken and any other volunteers who would like to participate in the social building. Instead of building houses one by one it is easier to build a small residential area or an eco village because:

1. It is also possible to decrease the cost per house of establishing water, electricity and sewage if more houses are built.
2. There is a learning curve making each extra house faster and cheaper to build.
3. It is easier to gather volunteers for a little bit larger projects.

As an example there could be a local football club and or other associations that come together for a few weeks in the summer and create a project factory to accommodate newly arrived immigrants, young people and retired people in the local area in order to let them have a decent place to live. Such events would do wonders for integration since the people living there and people volunteering to help in the area could create a bond that is far greater than that of most regular residential areas. Integration could also be entirely different in comparison to the common practice to accommodate newly arrived immigrants in suburbs that have a surprisingly low rate of Swedish people living there.

Even though Erik mentions that the economic incentives have been lacking for municipalities to attract and accommodate newly arrived immigrants in a socially sustainable way, he does think that there is a change coming where municipalities are starting to reevaluate and have growing incentives to both integrate newly arrived and find sustainable accommodation. Both Christian and Tinna mentions that it would at times probably have been easier to deal with the municipality if Egnahemsfabriken was a regular company. That would make it more straight forward to point at the economic numbers and thus show the municipality what they are contributing with. When it comes to more “soft” social value creation such as contributing to integration and people coming together it is much harder to point that out in a black and white manner. Also the benefits from that are much more long term oriented and almost impossible to calculate in a precise manner.

Christian has already noticed how Egnahemsfabriken's youth projects, with approximately 50% newly arrived and 50% Swedish kids, have had ripple effects in the local area.

4.3 “Society is a Collective Artwork

Erik puts it: “society is a collective artwork”, when talking about the need to create platforms for society to come together in a collective way and deal with its challenges. The line reflects the foundation and spirit of what Egnahemsfabriken is ultimately built upon. Coming together is really quite obvious when it comes to successfully dealing with integration. It is also a key to having a thriving older generation, especially since there are many old people in Sweden that experience loneliness. Egnahemsfabriken has a group of old ladies that are involved in integration and sustainability events such as “Mat och Prat” and running an integration café for newly arrived women. Erik mentions that Bengt Göransson (former educational minister of Sweden) has looked extensively into the importance of people's movements through associations such as sports, scouts, sobriety, community centers and so on. All of them built their own houses. The point being that it creates a strong bond building something up together and then taking care of it together. Most always these club and association premises are built and maintained with lots of commitment but not so much money. The idea is that enthusiasm fuels further enthusiasm and same goes for new ideas and novel ways of taking on old problems.

During this Corona crisis that we are currently facing, Egnahemsfabriken has proven to be an adaptive helping force by quickly establishing a cooperation platform where elderly and other people in risk groups can get in touch with people volunteering to help out by doing their shopping of groceries or run errands. The initiative have been appreciated by the municipality and Erik further explains that there are regulatory demands on municipalities that are entirely necessary but that is why it is important to have an involved civil society that can complement and act faster since there is no need to take into account bureaucracy such as procurement regulations, GDPR and waiting for the municipal legal counsel to approve anything.

4.4 Attracting people to become a lively hub

Food is already an important part of Egnahemsfabriken. It is most often something on offer during the events that are hosted. Whether that is an culturally exquisite dinner when they host integrational “Mat och Prat” (Food and Talk) events, Café Prat or social building events where coffee and snacks are offered. There are also collaborations with movements that are striving towards sustainability and conversion into more self sufficiency, local food production, recycling and in general being anchored into and driven by the local community.

Egnahemsfabriken currently has green houses, gardening beds and are about to have pigs, hens and even an aquaponic system (land based fish and vegetable farm) installed. Niklas Wennberg, one of the board members of Egnahemsfabriken is a pioneer when it comes to local food production and especially aquaponics has been a inspiring force towards establishing more food production at Egnahemsfabriken.

The same as enthusiasm gives birth to more enthusiasm there is a similar relation as to attracting more people to Egnahemsfabriken. There are visions to make the current site more alive by creating further opportunities for gardening, a playground, a café in the community center and even possibilities to live there in a tiny house or have a cultivation plot.



Figure 4.1: Illustration of Egnahemsfabriken with future developments. (Source: Egnahemsfabriken, 2020).

There is a kind of chicken and egg problem here that one would need to attract people that would make the place more alive and thus more people will come around more often. One natural way to do this is to offer food, snacks or beverages as most of Egnahemsfabriken's events already do. Christian points out this when he answers the question how to attract more people to Egnahemsfabriken with: "retired people likes cookies" and a laugh. Jenny talks about providing a platform where people can be creative. And Erik are on the same track emphasising that it is important that it is a platform run by local enthusiasts and to find things that can bring people together and utilise existing social structures, whether it is the church, sports associations or bringing together people with similar interests such as sustainability and self-sufficiency. There is also currently a house on the property that the municipal social services, due to their lack of available accommodations, are renting out to a family in need. However, the house is in dire need of refurbishment and maintenance and not really suitable for a family in current state. Moving forward it could be a good solution for the municipality to rent it out to Egnahemsfabriken when the current family there finds another place. That would let Egnahemsfabriken take care of the old house along with the old barn that it is already renting. Most importantly there would finally be possibilities of having water and a regular toilet instead of the plebeian portable toilet currently in use at Egnahemsfabriken. As Tinna identifies, a decent toilet along with a kitchen would greatly increase the attractiveness to hang out on Egnahemsfabriken on a regular basis as well as possibilities of hosting events.

4.5 Empowerment and equality

Jenny stresses that empowerment is something that is crucial for Egnahemsfabriken to become better at. It is something that needs to permeate the whole organisation and down to the very design method of individual self builders' projects. Niklas has throughout his other projects such as

Stadsjord and Aquapond been hiring unaccompanied minor refugees and immigrants as summer staff. He notes that it is incredible to see their pride to have a job and to work there. They are paid a bit more than if they would be working at McDonalds but the biggest reward seems to be the pride to be working at a place like Stadsjord, working with aquaponics, “it is huge for them”, as Niklas says with emphasis. There is no need for any previous work experience or education to take care of the required tasks. It is also easy to further centralise the operations to be able to monitor the different levels and be able to call and tell the staff what needs to be done. At their aquaponics site in Lerum there is currently an Afghan young man working who has basically had no school education at all, just working as a car mechanic in his home country before arriving in Sweden. According to Niklas this young man can take care of what needs to be done without any issues, and it has been wonderful watching his journey.

There are challenges when it comes to gender equality when hiring according to Niklas, in the beginning it was apparently more women interested in his Stadsjord project but nowadays it has tilted towards being an overwhelming majority of men hired due to the fact that almost all unaccompanied minor refugees that come to Sweden are men and thus it is hard to find a balanced mix between genders when hiring. Niklas has ongoing projects where his aquaponics solutions are being implemented in African villages, and when looking into successful ways of establishing these facilities it has been identified by locals that it is crucial to have primarily women running it in order to have especially the economic part of the business well-managed. Niklas has noticed that there are more guys interested in the technical areas that are part of an aquaponics facility. While he has throughout his years running various cultivation projects noticed that women are more prone to be interested in traditional gardening and cultivation, but when it becomes more technical the men start to take over. Finding ways to have a good mix is crucial according to Niklas.

Since the Corona crisis hit, Niklas has noted a substantial increase in interest for his projects. He was recently presenting his solutions of land-based fish farms to the political parties in the Swedish parliament as a way to “Corona-secure” Sweden. Food production is of course a crucial part of that and his solutions were met with great interest. Niklas ideas are for these aquaponics facilities to be both implemented on a larger scale but also on smaller scale in a local fashion. He has noticed how important and empowering it is for each individual who is participating in running these facilities. It lights a spark in them and they are radiating a feeling that what they do is truly important and that they are helping to put an important piece of the puzzle in place.

According to Niklas, land-based fish farms can yield huge amounts of fish as well as vegetables in a sustainable way. Briefly explained, they work by having fish in a tank which you have tempered at approximately 26-28 degrees celsius. The fish is called Clarias and is an incredibly resilient breed. It is a common fish in Africa where the watercourses can almost completely dry up. Clarias differs most fish because it has developed an ability to absorb oxygen not only from the water but also directly from the air at the surface. Thus it is part of the Clarias’ natural habitat to be surrounded by large amounts of its species in a tight space. In comparison to salmon which is a popular fish to farm the Clarias does not need saltwater and is much more resilient and can be farmed without being fed massive amounts of antibiotics, which is a huge issue with the salmon farms. The clarias fish can also handle big swings in pH levels without any issues. Niklas compares the salmon to a horse; it needs stable protein intake, marine protein and fat. Claritas on the other hand can eat just about anything, they are like the pigs who can eat apples for a month, then switch to munching on carcasses for the next month.

All in all the land based fish farming or claritas is incredibly effective and sustainable. Considering all that has been explained above, it is easy to question whether the taste of the claritas is desirable?

Niklas explains that some of the very best sushi restaurants in Sweden (Koizen, Hoze and Soyokaze omakase), are serving claritas and it is thus without doubt that it has good characteristics even in that regard. When it comes to possibilities of implementing aquaponics at Egnahemsfabriken or in projects where 20 or so houses are built on a plot, Niklas explains that they do sell their systems for around 2,5 MSEK (including four educational certificates). The place where the system is put has to have walls and floor that is approved for food. Stadsjord spent 20 000 SEK to customise the site and the next place they moved into a facility that used to be a cold storage and thus already had approved walls and floors. 2,5 MSEK is a lot of money, especially considering that the target group for Egnahemsfabriken's projects are especially people without much money. However it is important to note that a 2,5 MSEK facility would yield approximately 10 ton of fish per year and potential to grow 100 ton of vegetables. If a facility chooses to not grow vegetables, it is also possible to easily create bio coal that can store the nutrition from the fish water and be used as a fertiliser. A 10 ton facility is way beyond the needs of 20 households. It could however create possibilities for additional income through sales of food in a small store connected to the facility or even a café or restaurant. It could also be possible to develop smaller facilities, Niklas does point out that there are benefits in terms of cost- and time efficiency to scale up a bit.

The costs of running such a facility would mainly be found at electricity to heat the water and pump it around, and the food that the fishes are fed. Niklas currently gets most food for the fishes from residues from local breweries. There is a certain loss in water due to evaporation but that is not much of an issue in Sweden. More so for their projects to implement these systems in Africa. The 3000 watt needed to run the facility can however easily be solved by having 11 solar panels with a capacity of approximately 300 watt each. In Sweden Niklas would like to see municipalities start working together with these kind of facilities in order to reap energy or heat from waste water. There are ongoing discussions on various ways to collaborate and implement small scale fish farming with both Tjörns municipality as well as Lerum, two neighboring municipalities to Göteborg. Niklas is fascinated by the combination of the inland municipality, Lerum, working together with the island municipality Tjörn. There are also plans to build a big fish farm on Tjörn together with the fishing industry that are realising that it is essential to find alternative ways as they are noticing that the oceans are yielding less fish for every year that passes.

5

Analysis and Discussion

This chapter seeks to tie together the relevant findings from the empirical studies with the theoretical framework and provide the reader with an analysing discussion. First there will be a thorough look at Egnahemsfabriken as a Multi-sided business platform and how it could expand as such. That will be followed up with a look into sustainable and smart investments, maintaining passion and various benefits of local economics.

5.1 Egnahemsfabriken analysed from a MSP standpoint

As the author got more and more insight into what Egnahemsfabriken is and what they are trying to achieve, one thing that finally struck was the fact that the business model of Egnahemsfabriken is a complex form of a multi-sided business platform. That realisation led to some research into MSPs and, with that, an understanding of how difficult it is in general for this type of business model to take off. This could very well explain the struggles Egnahemsfabriken have experienced getting started, apart from the magnitude of the issues they are attempting to deal with. It is common to refer to the startup phase of a MSP business as having a “chicken or the egg”-dilemma, what came first (Evans, 2008)? In order to get established and start producing homes they need people who wants to get involved, either by building themselves or helping others. But to attract people to get involved they most probably need people there building to begin with. If one would look at other MSPs, almost all of them are ran at a huge deficit for many years while getting established on the market with a big user base. During this time, and even later on, it is common to attract a core user base by providing the product for free (or often in exchange for the user’s information and possibilities to offer sales of directed ads towards its users). This kind of practice, to let the expenses of the core user base be paid by other stakeholders that are attracted once there is a decent user base in place, is a very common solution to this “chicken or the egg”-dilemma (Hagiu, 2013). Let us take a look at the stakeholders of the concept that Egnahemsfabriken are striving towards in order to examine what can be done to get the business model going as intended.

The idea is to have self-builders who are at Egnahemsfabriken, serving as a platform, where they are building and helping each other out. Because building together is easier and more fun than doing it alone. So the purpose the self-builders are serving is to not only build houses for themselves but to also help each other. Another important thing to note is that immigrants and young people without employment could very well get a spark from such a project and take one

step closer to becoming a productive part of society that will benefit our economy and our society in general. On top of that Egnahemsfabriken are trying to attract other people who help out and build houses together, again serving as the platform where people want to come to help others and in turn get a reward in the form of; a good feeling that we tend to get when we help people out, making their own community a better place, learning about building and having fun. As a platform, Egnahemsfabriken could also provide possibilities for a self-building household or individual to offer people food that come and help out with a building project to attract more people to join.

It is important to note that the state or, more specifically, the municipalities are huge stakeholders in the case of immigrants building their own homes. Since they have huge expenses paying welfare checks and providing homes if they do not have any. On top of that they have big losses of income with unemployed immigrants or young people that are not integrated into society. As explained by the interviewees, it is rather difficult for Egnahemsfabriken to point out to the municipality exactly what they are contributing to and thus argue for resources. It is however important to continuously work with this relationship as it is also been identified from interviews that external funding will be needed for several years to come. Calculating the expenses with cost of accommodation, welfare checks and on top of that the loss of income due to unsuccessful integration, the state or municipalities would have quite a large monetary incentive to invest some money into Egnahemsfabriken in order to turn this ship around. Society steered by the state can be seen as a huge tanker ship that turns a degree or so every now and then and all of a sudden without anyone noticing the ship ends up in the opposite direction. As outlines in the project background, the housing and integration issues does not seem to be on the right course at the moment and it will not be possible to solve them overnight, but with small steps and smart investments it could eventually be solved over time (Eklund and Larsson, 2020).

Looking at the theory provided about MSPs in relation to Egnahemsfabriken it is first and foremost important to point out the great opportunities that such a business model could have if they start to get going and eventually scale up. However it is equally important to note how challenging it tends to be to actually get going and start to scale up (Evans, 2008, Van Alstyne and Parker, 2017) . Egnahemsfabriken is certainly no exception since their main focus is to provide something for a target group that is not financially strong, but rather the very opposite. On the other hand it is a target group that society is in dire need of helping, and contributing towards a solution to the challenges faced with housing and integration could quickly gain traction and capital from the government, municipalities, philanthropic institutions and individual contributors and investors.

What MSPs tend to do, from a theoretical standpoint, is to closely analyse the following three main functions (Zhao, von Delft et al, 2019).

5.1.1 Facilitating exchange between the member groups

From the author's observations, most interactions are heavily initiated by the passionate group that is leading Egnahemsfabriken. Although that has probably been necessary in order to get anywhere at all with the start up to begin with. However, there is a risk that the various groups are not as prone to take action on their own if they end up in a pattern where they are spoon fed rather than take the initiative themselves to do something. For example, Amazon is not doing anything but providing an opportunity for one to sell their products there. There are no invitations to drink coffee and have a snack to do anything but it is entirely depending on the initiative of the group who wants to sell their product to get it out there, and for the group buying the product to find it through their search engine. It is a little bit different of course for the young state that Egnahemsfabriken is in, but the point being that there is a risk that individuals are not empowered

if they are constantly too led by the facilitator. Bottom line is that in the future Egnahemsfabriken will need to develop ways to facilitate more effective exchange between the different groups without themselves taking the center spot.

5.1.2 Scale and build audiences to increase the likelihood of members in different groups finding suitable matches

Again, from the author's humble point of view, it is regarded that Egnahemsfabriken have been quite successful building an audience. There is a traction from the civil society from people who are interested in what they are offering and also from people keen to help out and further their cause. The audience is there but needs to be empowered involved, the audience needs to be invited up onto the stage where the management of Egnahemsfabriken takes a step back and let the chaos erupt to create some magic. Otherwise the audience will eventually be bored from sitting quiet in the audience and listening to a never ending presentation and reasons for why they need to be up there.

One way for Egnahemsfabriken makes it possible for themselves to take a step back is to provide a more tangible platform. It is something basically every successful MSP is built around after all, a tangible platform that is easily accessed and navigated for the various groups. The platform is always accessed online to make it as convenient as possible for the various groups to get involved. In some cases it is an application of some kind, in other cases it is a search engine, or both. Egnahemsfabriken is for the time being stuck in a medieval way of running a MSP, they do indeed have a website but it is not something that will involve and engage people beyond inviting them to sit down in the audience to be informed about something at a physical location. It must be noted that in the younger people in the target group consist of a people that are less to show up to things, research and get involved with their physical form present. They are instead much more prone to take initiative online through applications and social media.

5.1.3 Sharing resources between different groups to reduce the cost of providing it

It is important to not only share some tools, materials and gardening plots to make Egnahemsfabriken take off. An application with a search engine is the most common way for MSPs to provide a platform that can be used by multiple stakeholders, and thus reduce the individual cost of each group. For self-builders it could be a way to empower them by advertising for help to build their home, to offer or provide something in return, to find recycled materials and to find resources in the form of competence from people or videos on how to build or design. In the longer run it would make Egnahemsfabriken take a step back from the stage and invite the audience to the stage. Instead of a self-builder calling the management of Egnahemsfabriken if they are running into issues they can instead reach out through the app where there are possibilities of finding crowd sourced instructions or forms of helpful information, tools or materials. As mentioned before, the author of this thesis was the first self-builder on Egnahemsfabriken and has spent many lonely evenings on the site watching youtube tutorials and head-scratching while thinking that it is probably best to ask Egnahemsfabriken management another day and leave with little or no progress on the building.

Not only self-builders would benefit from an application. There are ways that it could effectively serve all stakeholders involved. Let us look at the investors or those providing charitable support next. As identified previously it is a challenge for Egnahemsfabriken to provide the municipality with compelling evidence of their value as that value is mostly not created in easily measured

economic figures but in the form of less tangible social values. An application that is thriving with people from the target groups and others interested in getting involved would make much more obvious for a municipality, or other charitable and philanthropic investors, what value is actually created. They could also get an opportunity show themselves and have exposure for marketing purposes and to create goodwill. As identified in the theory section it is a very common driver to incorporate sustainability and socially responsible investments (Lützkendorf and Lorenz, 2005). It is simply not as attractive to be mentioned in the bottom of a scarcely visited webpage in comparison to have exposure and other potential perks in a popular application. For the individual who wants to get involved and help it is more in line with the trend of crowdsourcing, crowdfunding, people being incredibly helpful towards strangers on various forums and professionally created DIY-videos (Zhao, von Delft et al, 2019). For investors who worry about risk/reward-ratio there is much more compelling proof that your money is backed by good assets if you can look at the cost and progress being made on each individual project easily on your app, while sitting comfortably in your sofa. The encouragement and empowerment for possible future self-builders is increased with easily accessible information about the current and previous projects.

5.2 Strategic Challenges

5.2.1 How many sides to bring on board

Involving more sides to participate in Egnahemsfabriken is a crucial next step in order to find more cross-side network effects (Hagiu, 2013). As Christian points out, there is already some resilience due to diversification of revenue. There is however work to be done for Egnahemsfabriken in order to reach its main goals of creating homes for the target groups. Finding ways to bring in more people that are building or are willing to help out to build is what needs to be done next. As suggested earlier, creating an app could potentially attract more people and more sides to get involved. Difficulties that can arise from bringing on too many sides for MSPs in general are that complexity and conflicts of interests could arise (Hagiu, 2013). For Egnahemsfabriken it is rather straightforward that the side that they are focusing on is the identified target groups with immigrants, young people and old people. It would thus be easier to navigate cases where conflicts of interests arise. It is however important to not become completely one-sided and also take into account what needs to be done in order to achieve an attractive risk-reward for investors. Complexity is a challenging thing to navigate for Egnahemsfabriken. On one hand it is almost required to have quite a bit of complexity considering how many big societal problems that are combined in order to create synergies in the business case. On the other hand it is important to bring on all these different sides in a way that does not make Egnahemsfabriken drown in all the work babysitting everyone.

5.2.2 Platform Design

Avoiding immense continuous work to babysit every side for Egnahemsfabriken is primarily done through a smart platform design. The more running costs Egnahemsfabriken takes on in the form of salaries, the more money continuously needs to be induced from charitable funds or various sides needs to finance the overhead costs of the organisation and eventually the concept would risk to become less attractive. In most cases MSPs are built around an application that is heavily invested into to begin with and eventually reap benefits for many years as the add-ons are relatively easy to incorporate and the cross-side network effects continuously adds dimensions to the business case (Hagiu, 2013). Egnahemsfabriken who are struggling with rather small economic means must find smart ways to build an app if they decide to do so. One idea is to incorporate a

lot of stuff that is not made by Egnahemsfabriken themselves, such as DIY videos of similar houses and work steps. If there is a business model developed where Egnahemsfabriken works to ensure the quality of the building in order to ensure that potential investors have their invested funds backed up by solid houses, then it is important to find ways to make that easy and as effortlessly as possible for them to not waste unnecessary time and resources. It could be done by having efficient ways for self-builders to document crucial steps of their building process which in turn would be easy and time efficient for Egnahemsfabriken to check. In general it is not necessary to invent the wheel all over but in order to keep the costs, especially running costs, as low as possible for Egnahemsfabriken it is good to link to and use all the great materials and information that is already scattered over the internet for free.

5.2.3 Pricing structures

As mentioned previously, most MSPs focus on building a strong user base by offering the service for free or for a price that does not even cover the costs of providing the service. The same would be reasonable for Egnahemsfabriken in the author's opinion. By attracting people in the target group to build for a very low fee or perhaps even no fee at all it would attract people to build simple houses with cheap materials and all of a sudden a ripple effect could be created where more involvement sparks more involvement. Instead of starting out with the view that each part of Egnahemsfabriken notoriously has to carry each own cost it could be an alternative to try out low or no building fees for a while to get a spark that could grow into a furious bonfire. If the app for cheap recycled building materials are brought onboard and the municipalities find ways to lease land, it could very well turn out to be more people who find it attractive enough to get started with a building project, which in turn could gain traction and attention that eventually lead to more charitable funds, investors or philanthropic capital becoming interested participate.

5.2.4 Governance rules

Navigating the trade-off between scaling, growth and cross-network effects on one hand and increasing complexity as well as difficulty of management on the other will be challenging if Egnahemsfabriken decides to pursue scaling through an application (Hagiu, 2013). If they do, it is important to stay open but still vigilant towards various ways of using such an application. An important way of decreasing complexity for Egnahemsfabriken is to invest into a good legal framework of the application to begin with that would move responsibility away from Egnahemsfabriken and towards the various user sides. Of course if Egnahemsfabriken decides to pursue the idea to act as a quality controller and inspector to ensure good risk reward for investors that is some responsibility that they take on, but it is possible to have ways of putting responsibility on self-builders to document and make such quality control tasks easily and effectively done if they do not have representatives present. If the application would develop into a way of providing various services and goods for different user sides, the legal framework should make the user sides responsible to deliver what is promised and not Egnahemsfabriken. A practical way to deliver what is promised, beyond legal requirements are to have a rating system where the user sides are rated in accordance to how they delivered what was promised. For example, if one side is offering a recycled window in current condition (“befintligt skick”) for 200 SEK and pick-up the buying side can not expect to have the window delivered or be in any other condition but the one inspected upon pick-up. Always simplifying the terms and conditions to make it as easy as possible to provide goods and services in order to make it easier to attract new users. It is also important, from a tax regulation and employee fee standpoint, to keep the terms and conditions as easy as possible and not put Egnahemsfabriken centre stage which would make them accountable to difficult legal scenarios.

5.3 Designing Smarter Investments

How can we make smarter investments? There is a common theme that when something is funded by the taxpayers there is an increasing risk of dissipation and waste in general. In 2018 the civic association, Skattebetalarna, voted the yearly biggest waste of taxpayer money to be the many millions spent on empty refugee accommodations across the country. 17000 people voted in the poll and the outrage that private companies were profiting hugely on hotels and hostels transformed into refugee accommodations that were paid millions in rent despite being empty ended up taking the title as the biggest tax money waste of 2018 (Skattebetalarnas Förening, 2019). The cases can go on but it is important to note that there is a dire need to ensure maximum benefits from tax money spending. Gustaf Möller, the former Swedish social minister for 19 years, is often credited the quote:

“Every dime of tax money wasted is a theft from the people”

Due to the Corona crisis and decreasing income from advertisement, the government has recently decided to increase the media subsidies to ensure access to information to the public (Regeringskansliet, 2020). Information is without doubt vital. Thomas Jefferson said:

“Information is the currency of democracy”

After all, what is the value of democracy without an informed public? Sweden already has the most expensive public service media per capita in the world and now the subsidy to media companies were increased from the regular yearly handout of 762 M SEK to first be increased by 200 M SEK in the spring budget change and now another 500 M SEK due to corona just to improve the numbers for the first half of the year. It is very likely that there will be another 500 M SEK for the second half of the year (Regeringskansliet, 2020). Note that this money is handed out to companies running shows such as Paradise Hotel, Big Brother and reporting news about what royalties are wearing and which celebrity gained a few kilos and went to the beach. Imagine what 500 M SEK invested into an application that could help with housing and integration issues could do for the society instead. The potential kick-back from such an investment could very quickly pay back the cost of the investment if one is to consider the ripple effects with more people prospering and being productive citizens who pay tax instead being a costly burden for the municipalities due to welfare checks and accommodation.

Considering all ineffectively spent tax money it is impossible for the author of this thesis to recommend municipalities to hand out money to Egnahemsfabriken without a format that will help make the investments yield as much as possible. It is first and foremost important for municipalities to find ways to measure how much their investments are yielding. The next step could then be to find ways to increase the yield and to also look into risk/reward-ratio which is a very central concept for investing. If there was to be created an application it is something that could be possible to incorporate into the application in order to give the side of municipalities, charitable organisations, philanthropic money and investors an easy (or let us rather put it: less difficult) way to see how their money is benefiting individuals and society as a whole.

Alongside the state, municipalities and similar government related charitable organisations such as Vinova and Formas that have already supported Egnahemsfabriken, there are increasing interest and thus possibilities to get corporations and individual investors to finance Egnahemsfabriken. As the RISE report identified, the interest from corporations who want to invest a small part of

their assets into sustainable projects could potentially provide enormous funds for a relatively small organisation such as Egnahemsfabriken. For individual investors there are also an increasing interest in sustainable investments, however in this case it is very important to ensure a very low risk since the reward (yield) of such investments could not become very impressive without another side paying for it (in this case the main target group that Egnahemsfabriken is trying to help in the first place).

5.4 Enthusiasm and Passion is the Primary Fuel

As shown in the interviews, it is clear that the passion and enthusiasm for Egnahemsfabriken is what has taken it as far as it has gotten today. There is a strong belief from every interviewee involved in the organisation that they are doing something that is incredibly important and that the issues they are trying to help solving are crucial for our society to address. There is no doubt that many people around Egnahemsfabriken are sharing these views and are in many cases keen to get involved or help out with or without any pay in return. As mentioned previously could be beneficial, despite the intense passion they feel for the cause, to take a step back and give a provide void in the space that is possible to be filled by the target group instead. It is a bit like the mother who loves her child so much that she becomes a curling mother who takes care of everything and never truly lets her child stand on its own feet and do something on their its own initiative. This unfortunately creates a passive child who is not used to taking initiative and solving problems but instead, for natural reasons, expects someone to take care of it somehow. The author's humble opinion is that this could be the case for the target group if Egnahemsfabriken are not able to find ways to take a step back and let participants fill that void with their needs and thus enthusiasm to find solutions to that. Of course there needs to be a sort of framework in place to ensure that things are done in a safe way and so on, but it would be beneficial if there are ways to form such a framework in a rather flexible way with a lot of responsibility lying on the different sides using the platform and not so much on Egnahemsfabriken themselves.

5.5 Local Economics

The theory about local exchange trading systems (LETS) and circular business models suggest that such a way of looking at economics can create a lot of work opportunities in the local area. It can thus be an effective way of reducing unemployment while at the same time even creating local economic multiplications due to cultural innovation (Peacock, 2000). Egnahemsfabriken has as part of their main target group immigrants who are in many cases from cultures that differ greatly from our Swedish culture and thus can bring in lots of innovation if they are provided a platform that could serve as a stepping stone to get started. It does not necessarily has to be an actual currency but just the platform or application to promote local trade of goods and services could be crucial to spark entrepreneurship and ripple effects on a local level. It does not only provide effective ways to profiting from sustainable practices such as recycling building materials and other things but also removes a lot of unnecessary transportation (O'Doherty, R. K., Dürrschmidt, J, et al. 1999). Looking at economics at larger scale it is very beneficial to recycle building materials not only from a sustainability viewpoint. If someone is to use a recycled window instead of buying a new window, one could argue that it would be bad for the economy because buying a new window would provide more business and the window-maker could in turn invest in his business and so on which would benefit the economy. Unfortunately, that is a common way to look at economics. However, it is important to take into account the unseen as well, and that is the fact that the person getting the recycled window for free has money left to spend on other things, such as a door, that would equally benefit the economy (Bastiat, 1850). The difference is found that if no one is recycling that window it would eventually be thrown away which would destroy

its value. That is the reason why society would also benefit greatly also from an economic viewpoint by recycling things and finding ways to preserve the value. In the case where one would only look at the window maker not profiting and contributing to the economy it would be comparable to arguing that it is good for the economy to set your house on fire, because one is not taking into consideration the value destruction.

In the current times with the world economy in a shaky state due to the Corona pandemic, it has become evident that local food production is not only necessary from a sustainable point of view but also a matter of national security. Sweden is today the least self-sufficient country in terms of food production in all of Europe. Years of free trade in the EU has effectively subsidised food production to more favourable climate in southern Europe. As Niklas points out it has, due to the Corona crisis, begun to emerge a realisation from decision makers that the current situation puts Sweden in a very vulnerable spot. Thus it would be reasonable to think that incorporating food production as part of Egnahemsfabriken in various ways could potentially attract more funds from the state or municipal level. Local food production could also be offered through a future application and gain traction and new users for cross-network effects. It could also produce work and income opportunities that would be much needed for many young people, immigrants as well as old people in need of a little boost to their retirement funds.

6

Conclusion and Recommendations

After a lot of long words, here we are at a little wrap-up with a conclusion and a few recommendations that could potentially help Egnahemsfabriken further its goals.

6.1 Research findings

Sweden has put itself in a position that is completely unacceptable in terms of integration and supplying accommodation for groups of people in socioeconomic vulnerable positions. As the world economy is trembling in front of what very well could be one of the biggest economic crises we have experienced during our lifetimes, these issues are surely not going to disappear by themselves. Egnahemsfabriken are looking for solutions that could have an immense impact on both the housing issues as well as integration. However they have not quite managed to succeed in actually providing what their main goal is; to build homes for, and together with, the most socioeconomic vulnerable groups in society which have been identified as immigrants, young and old people. They have on the other hand already achieved great results in creating a local force to be reckoned with in the form of an arena in which social events related to social building, food production, sustainability and especially integration is taking place. This research has taken a viewpoint of analysing the business model of Egnahemsfabriken as a multi sided platform and reached a few conclusions as to how the goals of the organisation could be furthered.

6.1.1 Research question 1

What factors are preventing Egnahemsfabriken from currently having self-builders or projects running with their intended target group (the most socioeconomically vulnerable people of our society)?

The research is pointing towards there being two primary barriers for self-builders to initiate projects. First one is to get enough funds to start building and second is to find a cheap plot to place the house on. There are investigations initiated by Egnahemsfabriken in collaboration with Research Institute Sweden where there have been identified a perceived interest from investors and philanthropic capital to find ways to fund projects. However, there has not yet been formed a way of conducting such investments so far. Therefore one main current factor preventing self-builders in the intended target group to start projects are that a framework for such investments would have to be built. Identifying how the various roles would look in these projects and empower or attract the different sides. The second barrier, to find a cheap plot to build on, could potentially be solved by creating collaborations with municipalities that could offer to sell or, perhaps even

better, to lease a piece of land to build on. Other actors that could potentially offer self-builders a plot to buy or lease could also be looked into. Finding synergies or finding ways that could attract municipalities or other actors to commit to providing a plots is needed. It could be useful to look into ways of lowering the price for self-builders in target groups through possible sponsorships from municipalities, charitable funds or philanthropic capital. As most MSPs try to attract the initial core user side by providing a service for free or in return for information or other useful resources for cross-network effects. In this case, if argued for and shown in a successful manner, user sides such as municipalities, charitable funds and philanthropic capital could see that the fact that people are provided cheap and sufficient accommodation as well as being integrated and taking one step towards becoming productive citizens could very well be reward enough for them to carry a relatively small cost of renting a space and using tools at Egnahemsfabriken. Lastly there are ways to incorporate guides, videos, forums and other ways to get helpful information and advice from volunteers for a very low cost instead of having to pay hourly fees for the help.

6.1.2 Research question 2

How could the target group be empowered and motivated to build their own houses?

As explained earlier in the example with the curling mother doing everything for her kid, it is possible that too much curling could lead to a lack of initiative. The target group in the most dire need of building their own home are not in a position to make too many complicated design and construction decisions but could in most cases just be in need of the most simple to build and cheap alternative possible. It is, with guidance from enthusiastic and skilled architects, easy to end up with a design process that is perhaps a bit superfluous and too professional. The process of designing your future home should be creative and playful. However it might risk leading to a house that is very difficult and costly for an inexperienced self-builder to actually build later on. The rigorous design process could even give an overwhelming feeling over how much needs to be done, which in turn could lead to a lack of initiative because one does not know where to begin the big project towering up in front of you. It is of course important to have a decent idea of what is going to be built, how much it might cost and how long time it could take to get it done. Considering that Egnahemsfabriken now has quite a few reference objects in the form of simple Attefallshus (25 or 30 square meter houses that are allowed to be put on a plot without going through the process of getting a building permit) that are suitable for their target groups, it could be easy to reference the cost and hours required. If the self-builder wants to go for it, Egnahemsfabriken could instead of a rigorous design process focus their resources on just getting started with a design that can later be customized a bit later on when the self-builder has built a little bit and started to feel more comfortable and informed as to what is possible and what they would like to spend some extra time and money to do. The work and design process an architect is providing in most every case is one in which either there is someone in a very good economic spot who is interested in their services, or there is a larger entity building something in larger scale. In this case the design process needs to be tailored in a more minimalistic way to suit someone who has more restrictions on price and what is possible to build. The design process could be interwoven with purchasing or ways of acquiring materials, focusing on making the design cost efficient and incorporating as much as possible free or low cost recycled materials.

The theoretical part written about Simon Sinek's (2017) model as for how to find a genuine drive was to point out that the people in the target group has a very clear "Why". They need a home! They can not have a decent life in Sweden while living in crowded asylum accommodations, in suburbs with no work opportunities and, in some cases, with barely any neighbors with Swedish origin. The target group be living in their parents house. They could even be homeless. They perhaps can not stay in their current home because they can not afford to pay for it when they

retire. The target group has a clear “Why”, and the more they deserve to be in the target group, the more desperate their “Why” is to get a home for natural reasons. The process for Egnahemsfabriken should be more oriented towards “How” are we going to help out here in the most efficient way. That is probably not to be spending time talking about colours and certain paint based on oil and eggs. It is most likely to find a cheap piece of land and to find an easy way to build a simple house, hopefully with some help from others. The “What” is something that can grow forth as the stone has been set in motion. All of a sudden things and people will appear that will naturally develop what the house end up looking like. First that stone must be focused on to be set in motion by finding the cheapest possible plot and house to get started with.

Seeing others who used to be in a similar position as oneself succeed to get out of it could be great inspiration. In that regard it could be useful to develop the first few houses for people in the target group on their current plot which would not only remove the barrier of finding cheap piece of land but could also serve to break the ice that in turn could inspire other self-builders. It would also put some homes at Egnahemsfabriken to make it a more lively place and hopefully these initial self-builders would be happy about their improved situation and pay forward that to future self-builders who are there and could potentially have much inspiration and encouragement from them. There would also be a few more reference objects to draw inspiration and information from to benefit future buildings.

7.1.3 Research question 3

How can other people, besides the target group, also be engaged to contribute towards a thriving Egnahemsfabriken?

Most people who are an integrated part of society have a shortage of time. Especially with kids, houses, jobs and all activities that tend to stack up in life. There is a certain shortage of time that is forcing people to prioritise what they want to spend what little free time they have. It is important to create activities at Egnahemsfabriken that are compatible with the hectic lifestyles of the people they want to attract to help. There is a certain reward in just about everything we do, it just comes in different ways. Whether it is a little boost in one of our happy hormones when we give a few coins to the beggar outside the food store or if it is the social interactions and “fika”(coffee and snacks) when we attend a little gathering. In these hectic times it is important to maximise the reward to better compete with all other things that one could or need to do. As for the people that Egnahemsfabriken wants to attract to help out with building projects, it is most likely people who enjoy the reward from the good feeling they get when they are helping people and see the progress and positive results they are contributing to. Therefore it is important to do two things to attract these people: first is to design ways to help people in the target group as efficiently as possible. For now there are building events and so on at Egnahemsfabriken but the events have been focusing on building birdhouses or helping out with buildings for Egnahemsfabriken instead of helping out self-builders. There is of course a lack of self-builders in the target group, which explains this, but an obvious improvement would be to have events where the target group is involved and benefiting, which would lead to everyone experiencing a more genuine reward from participating. Second is to become more flexible in the way you can help out for people who are willing to do so. For example there might be someone who is keen to help out but just simply does not have the time to attend the gatherings. Perhaps this person could be equally helpful answering some questions on a forum when he has the time after the kids have been put to sleep. Or maybe someone could drop off some leftover building materials. In both these cases it is important to find a social platform that will both make it more likely that they help out in a convenient and efficient way and also increase the reward, and thus the incentive, to help out by more closely following how their help is contributing to something good. Working with the incentives to help in general

is important, it could be to better see how one's contributions and investments are affecting others, to monitor the rewards in a more comprehensive way. It could also be by increasing the rewards with food or favors in return. In general by making it more open to various ways to find solutions for all various ways people might want to help out.

6.2 Recommendations

There is already a project in the process of making an app for recycling building materials. The suggestion is that Egnahemsfabriken would look for funds that could heavily expand the project of building such an app to encompass functions such as:

1. Ways for self-builders to get help and guidance to build simple houses. Links to videos, drawings, design inspiration and setting up food production. Could be in the form of a forum where questions and answers are easily found for later projects (FAQ).
2. Organise events to attract other self-builders or other people to join for a part of the building process. There could for example be food or something else offered in return to others. Other self-builders could settle to have the favor returned.
3. Provide an easy way to offer goods and services. Could include recycled building materials, food or just about anything that is not offensive or illegal to offer. Let there be an entrepreneurial and culturally diverse force unleashed upon the local community that gives birth to working opportunities, integration and thriving local economy. It would also be sustainable and perhaps, in worst case scenario, the boost in local food production could be the most important part if this crisis is to escalate further.
4. Give the app a feature with easily accessed flow of information of social interactions, happening and general progress that is enabled through it. Make it possible for actors such as the state, municipalities, charitable organisations, philanthropic capital and investors to easily monitor how money is spent and what is enabled and yielded in return.
5. Eventually give sellers of food an opportunity to offer their food through an “Auto-mat” which is a small automated food store that can be located at Egnahemsfabriken. It would provide a natural platform where food is picked up and delivered, attracting people to go there and maybe stay to have a coffee, do some gardening or help out with a building project.
6. Provide communication channels and social interaction.
7. Ensure complete transparency for all sides involved. Showing what money is coming in and from who, how and on what it is spent on by Egnahemsfabriken, how it is spent on individual projects, how much money entrepreneurs earn selling goods and services. It would also simplify matters for individuals and their duties to pay tax and employer fees if necessary. It would also serve to make it easy for authorities to provide guidance for how much tax and various fees individuals are accountable to pay. Since many individuals are not familiar or comfortable with rules and laws concerning things such as tax and employer fees, it could be helpful to get that clarified through a simple system and checked possibly checked by appropriate authorities.
8. Use crowdsourcing models that enable people to participate and provide ideas, to vote, do various tasks and contribute financially or in other ways to what they would like to see developed further. Philanthropic capital and investors can choose to provide investments into ideas they believe in and are able to set their own terms and conditions they would like to have in terms of transparency, quality control and so on.
9. Have easy and generally remote functions for quality control of the buildings if Egnahemsfabriken is to take on a role where they ensure that good houses are being built to back up investments.

Egnahemsfabriken could initially look for funds to develop the application. When the app is created and as it is developed further Egnahemsfabriken can take a step back, reduce their running costs and let the app grow in an organic manner. If Egnahemsfabriken wants to host workshops and meet ups for integration, sustainability and social building they can even go as far as to eventually look for funds through the app themselves. The important part is that this way of scaling Egnahemsfabriken would partly remove the issue with a regular corporation scaling with its tree structure and thus giving each individual freedom of action in an inverse proportion to the entire tree.

The app could eventually become a free market of everything, where just about anything would be possible to offer or ask for. It is almost a bit like capitalising socialism, providing more transparency and flexibility for individuals or funds to support and pursue what they are interested in and bigger reward by having the opportunity to closely follow how the investment is benefitting people. There could be standard ways and terms of providing funds or investing, for example: a certain interest rate, quality controlled by Egnahemsfabriken, built by and for immigrants, young and old people, built on leased land from the municipality to decrease costs of land, be built to be rented or build to eventually be owned by the self-builders. There could also eventually be possibilities to form your own terms and conditions for your investment, for example one could have terms that only allow a certain age, to have goods or services instead of interest, to provide a plot to build on and to be quality controlled by someone else or not at all. The opportunities are endless but it would in the end make it possible to design opportunities in any way you would like. It could possibly be quite interesting for some philanthropic money or investors to design it in a certain way that they believe gives them the best return, whether that is, money, publicity, a better society or whatever it might be. Hearing Niklas Wennberg describe the immense pride and happiness in the young immigrants working over the summer at his fish farm made the author's heart so incredibly warm, and in turn led one to believe that the benefits from letting investors and other contributors get one step closer and see what their investments are generating could lead to many more investments and a willingness to prioritise the local initiatives.

As mentioned previously, there are two main barriers to self-builders who are interested in starting their own projects. The first one is to get a loan or the funds needed to build. That would be enabled by an app as described above, it could be so many different entities that end up making it financially, and in other ways, possible to initiate a project. These various entities would also have much more reward in the form of transparency and a personal contact and connection the person or persons benefiting from their grants, which in turn would make it more likely that they or others would donate or invest in future projects. The second barrier is to make it easier to find a cheap place to put the house on. Considering how many opportunities could arise, from a retired person looking for some extra income and finding a way to let someone build a small house on their plot to a church or football club or company giving up, renting or selling a piece of land to build one or more houses. All in all, the idea behind this app is to unleash the beautiful characteristics that we all share, they may vary between us and come out in very different ways. Humans have been helping each other for millions of years, that is a deeply evolutionary rooted trait that has simply kept us alive, because we all need help sooner or later. In the end I have yet to meet a person who does not enjoy helping someone, everyone does not enjoy helping others the same way but if we can find ways where people can help and get help the way it suits them, then I believe we have a lot of potential generosity and prosperity to witness.

6.3 Future studies

The study that has been conducted decided to take on an overviewing approach to analysing Egnahemsfabriken's organisation and business model. As such there are several areas in which the thesis could have gone into more detail if more time and resources were available. Unfortunately this is all that could be encompassed and the author decided that it was most appropriate to begin with this general study of the organisation in order to find areas that could possibly be investigated further or changed right away. One important thing to study further would be to make more cost analysis on individual building projects as well as Egnahemsfabriken as a whole in order to develop detailed suggestions as for how the framework and risk/reward-structure could be designed for investments.

As this study has identified, there is a potential to further the goals of Egnahemsfabriken by creating an app. Future studies could possibly look into such an app in greater detail in order to reach conclusions as for how various features could be designed in the best possible way. Apart from taking into consideration user friendliness and features, it could also be important to study the role Egnahemsfabriken would take on as platform providers. How would they make money to cover costs, what would their responsibility be in the different ways that contracts and agreements could be formed. What are the legal difficulties and requirements from a contract law standpoint and from a tax law standpoint.

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