



## **Enclosures and Fertility in Southern Sweden. Were peasants consciously regulating their decisions regarding family size?**

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Abstract: This study analyzes the total fertility rate for twenty parishes in southern Sweden from 1785-1840 and its relationship with the enclosure movement. The analysis shows that the total fertility rate increases after enclosures took place. The explanation of these results is that peasants foresaw a profitable economic future because of the change in property rights and the change in the way agriculture was carried out

Keywords. Enclosure, Scania, Institutional Economics.

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“There are no magical ‘cultural’ or ‘economic’ forces controlling individuals, other than those affecting the dispositions, thoughts and actions within individual human actors. People do not develop new preferences, wants or purposes because mysterious “social forces” control them. What have to be examined are the social and psychological mechanisms leading to such changes of preference, disposition or mentality. What does happen is that the framing, shifting and constraining capacities of social institutions give rise to new perceptions and dispositions within individuals. Upon new habits of thought and behaviour, new preferences and intentions emerge...The crucial point in the argument here is to recognize the significance of reconstitutive downward causation on habits, rather than merely on behaviour, intentions, or preferences.” (Hodgson, 2003; pp 162, as cited by Fleetwood, 2008; pp 188).

## **1. Introduction**

The agricultural revolution in Sweden took place between 1750 and 1850 and it is recognized that the land enclosures preceded and accompanied early industrialization. For Simon Kuznets, modern economic growth dates to the late eighteenth century and some of its features are: high growth of per capita product and population, a rise in the rate of productivity, a high rate of structural transformation in the economy and a changing ideology and structure in society (Kuznets, 1973). Enclosures fit in these features in several ways. First, enclosures increased agricultural production and productivity (Olsson and Svensson, 2007); second, enclosures changed the material mode of production and this can be seen as a structural transformation in the economy; third, population increased between 1750 and 1850.

It is recognized that there was a population growth occurring after 1750. Population growth was rapid in peasant parishes after the enclosures (Fridlitzius, 1979). However, as stated by Fridlitzius, the features and relationship of the population increase to enclosure are not clear. Moreover, it is still not obvious the way the demographic development in manorial parishes was.

Examining the relationship between fertility and enclosures is an important subject because it will shed light on one aspect of fertility behaviour of pre-industrial populations that has not been previously researched in detail. There have been studies that have mentioned that there was indeed an increase in population after 1750 studied,

such as the one made by Fridlitzius; however, a detailed story of how enclosures could have had an influence on demographic outcomes is still on the need of being explicitly researched.

This essay will be an attempt to stimulate this agenda by analyzing the trend in total fertility rates for twenty rural parishes in southern Sweden in the period comprising the end of the 18<sup>th</sup> century and the beginning of the 19<sup>th</sup> century. Additionally, this essay will endeavor to provide an explanation of the patterns observed based on the new institutional economics approach. At one stage it will be sketched that the change in property rights had an influence on the economic efficiency of the parishes under study and that this also had an effect on the behaviour of individuals living in those parishes.

The relevance of this attempt arises from the fact that there are not studies concerning the study of fertility and its relationship with the land enclosure movement.

This study will be focused in the enclosures that took place in the region of Scania in the 18<sup>th</sup> and 19<sup>th</sup> century. Twenty parishes will be analyzed. Eighteen parishes belonging to the Malmöhus County and the rest to Kristianstad County. The parishes are distinguished in terms of its economic structure, i.e. manorial, peasant or mixed. In our sample, twelve parishes have a peasant structure; six are manorial; and two are a mix of these categories.

The way in which the possible response of fertility to enclosure will be by examining at the total fertility rate before and after the year of enclosure of the parish. Total fertility rate is available since there is data for totals of population by age and also number of births per age group. Crude birth rates are a rather rough measure which would not be so reliable in looking at what we are looking for.

We must stress that the findings of the present analysis should be interpreted with care since the parishes under study were rather small in terms of population totals. Nevertheless, we should say that the pattern found in fertility behaviour in this essay should not be totally discarded because of its simplicity in terms of empirical analysis, since it may reveal some patterns which would help us to improve our understanding

concerning agricultural change and the way this social phenomena impacted people's decisions about family size.

Being a study of macro data for individual parishes, there is no possibility to differentiate between social groups within the parishes, that is; whether the inhabitants of the parishes are landowners, landless or semi landless. Additionally, the marital fertility will not be analyzed, due to data availability restrictions.

The approach in the analysis of changes in total fertility rates and/or age-specific fertility rates will be a top-down scrutiny. That is, firstly we will describe the economic structure of the parishes and its differences, then we will describe the difference in property rights in these categories, then we will try to identify the way in which these economic structures were affected by the enclosure movement; and then we will try to outline an explanation of the effect of this new institutional setting on the fertility behaviour of the parishes under analysis. So, if there may be a pattern of increased or decreased fertility after enclosure it will be discussed to what extent it is believed that the enclosure movement contributed to the change in demographic behaviour of the populations of our study.

The underlying premise in this study is that the change in the institutional environment created by the enclosure movement had an effect in fertility behavior. Furthermore, being enclosures and specific in time event we would expect that the changes (if any) would be seen not immediately after the village was enclosed. This is the reason why we will examine the changes in total fertility rates from five to ten years after the parish was enclosed.

Based on the description above we can now turn to the formulation of the main research questions posed in this study

1. Was there any observable impact in total fertility rates after enclosure took place?
2. Were there any differences between parishes depending of their economic structure, i.e. manorial or freeholders?

In order to answer these questions the total sample of parishes will first be analyzed, describing the movements of total fertility rates; and then we will make the differentiation dividing them according to their economic structure.

The speculation that we can do at this stage is that the change in institutional settings derived from enclosure made peasants feel that it would be profitable to bear more children.

The next section will offer an historical background regarding the enclosure movement in Scania and how it took place. Then we move on to briefly mention the topic of pretransitional fertility due to its relevance to this study, due to the fact that even if the studies made trying to find deliberate action to bring fertility down, we believe it is relevant to pose the notion that there could have also been deliberate action to increase fertility. The next section provides a description of Caldwell's intergenerational wealth flows and the possible link with the argument we are trying to make in this thesis. Then we move on to describe a challenge that Thorstein Veblen posed to economic research and we will offer an explanation of why we think his arguments are of relevance to the premise taken in this thesis. Afterwards, we provide additional theoretical arguments that may support our view of the attitude of peasants towards enclosure through the description of Harvey's Leibenstein decision-making process in fertility decisions. Then, a contextualization of the enclosure movement with the aid of institutional economics theory is presented. Lastly, the thesis describes the data and methods used and the results obtained; and a conclusion is finally offered.

It should be clearly said that there is no previous research trying to link enclosures and fertility, therefore, this essay can not include a section regarding what has been done before in this matter.

## **2. Historical background**

### *General discussion*

The reader of this thesis could well perceive this historical section as not very complete and inclusive in its description of the enclosure movements in Scania, however, we must stress that one of the main objectives of the study is to view the process of enclosures in Scania from a theoretical point of view, therefore, we will not devote extensive effort in giving an extensive description of how the process took place, this has been done by several Swedish scholars (Svensson 2006, Fridlitzius 1979, Pred 1986). The interest here is the outcome, not the process of this outcome; in this way, we believe we can provide the informed reader with an additional point of departure of how to assess the enclosure movement of the beginning of the nineteenth century and its potential impact on the way individuals were assessing the possible benefits of larger families.

Therefore, we can continue with our discussion of enclosures. Enclosures could be understood as the process of abandoning the common-field system and replace it with a system of private property over the use of land. This change as such had important economic and social changes. On the economic side, it may be argued that enclosure of fields led to a more intensive and productive use of land resulting in an overall increased productivity in the agricultural sector (Svensson, 2008).

It has been the center of debate in the literature whether enclosures increased productivity or not. Some authors have claimed so, but others more recently have neglected those studies and have concluded that the gain of enclosure was minimum (Clark, 1998). However, this revisionist result was found for England, whereas for Southern Sweden, it has been tested and proved that productivity indeed increased (Svensson, 2008).

However, the productivity change is not the main attention of this essay since it will be stressed that peasants of that time, foresaw a gain from enclosing lands, and therefore, this made them feel that this change in land tenure would be beneficial for them.

Some authors, like Fenoaltea (1976) have made an argument in favor of the efficiency of the open field system. He argued that there was certain evidence that pointed to the

direction that the common fields were attractive because they centralized the peasants', landlords', and community objectives which were operating in the same land markets. And he emphatically criticizes historians who focused on how common fields were inefficient, but he says, they never asked whether they were inefficient.

Nevertheless, scholars like McCloskey (1975) have argued that the enclosures were a necessary step in the history of agriculture due to the fact that it entailed a reduction in risk. This because the farmers having their own land at their disposition, they could use all their resources to do the labour in an efficient time.

### *Scania*

A large part of Sweden in the eighteenth and nineteenth century could be well labeled as an agricultural society, since approximately 10% of its population was living in towns in the period 1700-1850 (Gadd, pp 45). This was also a period that was characterized by land reclamation. This process was mainly done in peasant parishes, while the process was weak in tenant land. Gadd says that this could have been because of the differences in strength of property rights.

The process of changing from an agricultural based open- field system to a privately owned and managed agricultural system took place with the enactment of the Enclosure Ordinances. These land reforms are considered to have played an important role in the process of modernization of agriculture.

In Sweden, the enclosures were a process of land consolidations. They were initiated by the government through the enactment of laws providing the basis for the enclosures. These laws were carried out in three periods. The first act was the Storskifte Act of 1757; this law did not attract a large part of society and its effects on the use of land were not very important. Magnusson (2000) suggests that this act was not very successful because there was still some conservatism of the peasants of that time.

The Enskifte Act of 1803 in Skane was the one that meant a radical departure from the way agriculture was being carried out in the past. Skane was a forerunner in this process of abandonment of the old open field system. It is acknowledged that outside this area of Sweden this reform was not very well accepted, or rather, it was carried out on a

limited basis. It was in 1807 when the General Enskifte Ordinance was issued. This is the enclosure we are mainly interested in this study.

I speculate that even if Storskifte did not have considerable consequences on the spatial outlay of the villages, it may have had an effect on the mentality of the peasants.

This is important to say because it may set the basis for the adoption of Enskifte in such a way that it was fastly established mainly in the peasant parishes

At a later stage, the Laga Skifte (1827) was enacted and we can say that in our sample, only a few parishes were enclosed at this time. The main objective of this land reform was the land would be to consolidate the strips into large units, with the purpose of dissolving the villages (Magnusson, pp 18).

As we can see, these land reforms were initiated by the government through the enactment of laws; however, they were really well accepted by the peasants themselves because the law provided the incentive for the peasants to apply for enclosures themselves. So, in Skane and most importantly, in peasant parishes, the enclosures were initiated mainly by the initiative of a single person with the desire to have its land consolidated.

The incentives for doing this were mainly an increased commercialization, an increase in grain prices, also the fact that even if production was increasing, taxes were not increasing because productivity was increasing. Another factor that may have been an incentive to enclose was that it was relatively easier to establish new farms (Pred, pp 41 – 61).

Nevertheless, we should say that the enclosure movement was quite different between manorial and freeholders parishes. In the manorial parishes, the landlord still was the authority which was dictating what to do with the land; therefore, the peasants did not have the choice to enclose if they wanted, and the landlord could well decide not to enclose the parish. If the landlord decided to enclose, the tenants of the land would receive a piece of land of the same size and they were obliged to pay the same rents to the landlord (Bergensfeldt, pp 22). Nevertheless, innovations in agriculture were more feasible to be carried out because farmers now could see the fruit of their labour and these could have been seen as an investment for the future.

This thesis is only interested in analyzing the enclosures that took place in 1803 and 1827, which were implemented by a law. The formal name of these acts is Enskifte Enclosure and Laga Enclosure Act, respectively. We will not be focused on the previous enclosure act, Storskifte, due to the fact that this enclosure was not an important factor in changing the conditions on how land was owned or used. It was mainly the Enskifte act the one that had profound effect in the structure of property rights of the parishes under study.

### **3. Pretransitional fertility**

This section will review the important topic in historical demography regarding whether pretransitional populations were deliberately controlling their fertility or they were in a state of natural fertility. This review is useful because it will set the basis for our argument which in its core is that people were indeed regulating their family size due to the fact that they might foresaw a profitable future and in that way, they would bear more children.

The conception about pre-transitional fertility in Europe is centered on the debate of whether there was a deliberate control of fertility decisions, or if the populations were merely in a state of natural fertility, which is defined by Louis Henry (1965) as a state where there is absence of conscious control over fertility. It is widely acknowledged that a way to control fertility was the postponement of marriage until couples were able to economically sustain themselves satisfactorily. The studies of populations made at a highly aggregated level trying to measure the impact of increasing food prices on fertility outcomes (Galloway, 1988) find that indeed there is a negative impact on fertility when price crisis emerge; however, the authors do not seem to believe that this negative impact was due to a deliberate choice in controlling family size; they point out to an explanation involving temporal malnutrition, spousal separation, or marriage postponement.

So, we can see that the literature has been mainly focused on studying deliberate fertility control in a way that it should decrease, not on the opposite side, that it should increase. However, it seems logical to think that if there were certain populations that

were adjusting their choices regarding family size due to bad economic times; we can argue the opposite as well, that is, that there could have been some populations in the past that they were deliberately trying to increase their family size due to their perceptions regarding a profitable economic future in the short term.

In order to test for the hypothesis of whether pre-transitional populations were exerting a conscious control over their fertility decisions, a statistical technique (the so called M and m analysis) devised by Ansley Coale offers the opportunity to test whether there is deliberate control of fertility; more specifically, the method aims at looking if there was parity-specific control. Some studies (Knodel, 1977) made using this statistical method find no evidence of deliberate control, rising the doubts that pre-transitional populations were in a state of natural fertility. For example, Alm Stenflo (1989) in his study of the population of northern Sweden finds no evidence of parity specific control

Nonetheless, in studies made using longitudinal individual level data studying the impact of high prices on fertility (Bengtsson and Dribe, 2006), it is acknowledged that social groups in adverse economic circumstances (landless and semi landless peasants) were regulating their fertility in a deliberate way in response to high rye prices. This finding reveals somehow that the populations in the past were probably aware of their decisions regarding family size. Furthermore, in another study made by the same authors (Bengtsson and Dribe, forthcoming), they find one more time that landless persons were controlling their fertility consciously. The authors conclude that “couples in preindustrial Scania were not captives of structural or cultural factors, but agents who constructed their own lives” (Bengtsson and Dribe, pp 33, forthcoming).

In addition to this, Bengtsson et al (2004) made a series of studies for populations in Europe and Asia in order to try to find their response in mortality to economic crisis measured by large shifts in prices of food. The authors' main argument was that the ability to overcome economic harsh times was an indicator of the standards of living of the populations they were studying. In relation to our argument regarding fertility, the authors found different responses by age and gender in mortality to rising food prices, being the consequence of decisions made by families aiming to protect some of the members of the family. These decisions could be categorized and named as human agency, in the sense that it is a conscious decision (Bengtsson, Lee and Campbell, pp

431). We will return to this point about human agency when we describe Harvey Leibenstein's notions of decision-making processes in fertility decisions.

Therefore we could claim that this study; in spite of the fact that the level of detail in the data can not make a definite claim about the active role of peasants in their demographic decisions, may contribute to the series of studies which using microdata have found that peasants in Scania in the beginning of the nineteenth century were very aware of the conditions they were living in and this way, they were adjusting their decisions to their best interest. Whether it would be acceptable to have a large number of children, or to restrict fertility; it is something that we think it was a decision consciously taken into account by persons before the well known decline in fertility of the late nineteenth century.

The present study will make a claim on this direction, that is, people were consciously adapting themselves to the changing economic and social environment they were living and therefore were taking the decisions about family size on the expectation of having benefits from these decisions. More specifically, this study attempts to put forward the argument that for the families living in the parishes under analysis, it was a rational decision to increase their family size due to the change in property rights that was accompanied by the radical enclosures that took place in the area.

#### **4. Theoretical framework**

##### 4.1 Caldwell's intergenerational wealth flows

The main demographic theory for the analysis of fertility in this essay will be based on the theories of demographic transition developed by John Caldwell (1976). Caldwell's theories are mostly focused on fertility decline; however, the insights provided in his statements will be used here to argue that for our scanian parishes it was a reasonable choice to bear children right after to enclosure due to an economic gain from it. Caldwell argues that there are two types of fertility regimes one where there is no economic gain to individuals from restricting fertility, and the second where there is

often or eventually economic gain from the restriction (Caldwell, 1976). Further he claims that this kind of behaviour is economically rational.

The main argument of Caldwell is that families in pretransitional populations saw advantages of having large families because children were seen as an asset and because the intergenerational wealth flows are from children to parents. When these notions of large families are ended, the wealth flows reverse and therefore, children are not seen as an asset in terms of labour so the families might opt to reduce their family size. This reduction in family size is related to what Becker calls “quality of children”, which is a concept that encompasses a wide range of parental investment on children, such as education.

However, the wealth flows are not only related to tangible, economic goods. These wealth flows are also related to non-economic benefits. He says that for example, in traditional societies, men have more prestige for being the head of large families (Alter, pp 24).

We believe this framework is strongly related to the enclosure movement simply because the Enskifte act of 1803 involved a quite drastic change in the way land was used by the peasants of the time. There was a change in property rights, and as such, this brought change in social relations and also on future expectations; therefore, we believe this whole change may had an impact on how individuals were assessing the size of their families.

It is a belief of the writer of this thesis that individuals have always controlled fertility in a conscious manner. They have always been aware on the costs or benefits (speaking in economic sense) of bearing children. Even if it has not been completely proved that it was a deliberate response/decision, the way long term demographic change has occurred, in my view, points to the fact that there has always been a somewhat clear idea on the number of children parents’ desire.

## 4.2 A short background on institutional economics and human behaviour

This section will provide a short discussion on Veblen's notion of institutional economics. This is useful because our aim with this thesis is to test in an empirical and theoretical manner that a certain set of institutions had an effect in perceptions of the populations under study regarding the benefits of bearing more children. As such, this attempt could be seen as trying to encompass many things at once. On the one side, trying to explain in an economic terms how beneficial were enclosures in terms of profits; and on the other hand; how these changes had an influence in relative perceptions of humans seeing as an incentive to bear more children.

The attempts to have an all encompassing theory of how economic and social processes influence individuals have a long story. It could be said that it was Thorstein Veblen (1898) who posed this difficult task for economic science, since the research program he posed demanded that scholars should devise theories conceived in line with the "economic life process". This life process involves taking into consideration the human beings, their knowledge and also their habits of thought. For Thorstein Veblen, humans are dynamic in the becoming of their activities and these are determined by their "circumstances of temperament". In Veblen's words "...the economic life history of the individual is a cumulative process of adaptation of means to ends that cumulatively change as the process goes on, both the agent and his environment being at any point the outcome of the last process...What is true of the individual in this respect is true of the group which he lives. All economic change is a change in the economic community..." (Veblen, pp 11,).

It is under this view that individuals are taken as shapers of their own process of development. Whether cultural, institutional or economic forces are the driving change in his community is taken into account by the individuals through a conscious mind which seeks comprehension of facts in a cumulative perspective. It can be seen that Veblen's attempt was to incorporate into economic theory a whole range of inputs from other scientific disciplines in order to have a more comprehensive understanding of the institutional development.

Relating this to our enclosure study, we can say that the enclosure movement was a phenomenon which changed the institutional structure of how agricultural practices were carried out, had an impact in the way individuals were assessing internally the costs and benefits of the new type of agricultural system they were living in, and this in turn affected their perceptions on family size.

Furthermore, another institutional economist interested in having an encompassing theory of how institutions influence human behaviour is Oliver Williamson. Williamson (2000) states that there are four levels of social analysis. The top level of analysis is a level where informal institutions, customs, traditions and norms are located. In the second level we can find the Institutional Environment in which the “formal rules” that North speaks about are introduced. The third level is the one where the institutions of governance are located, in which governance structures are aligned with transactions. Finally, we can find the fourth level is where resource allocation and employment take place. It is in this level where agency theory and the neoclassical analysis are located.

For Williamson, it is very important that institutional economics places its emphasis on the study of *human actors*. It is here where it is emphasized that as social scientists, economists should include in their research agendas the nature of the human beings whose behavior we try to elucidate.

Therefore, we can claim that these ideas are of central importance to this thesis because the enclosure movement involved a radical change in the way agriculture was carried out. Property rights were better defined, they were sharply enforced; and these facts influenced the everyday life of the people living in the parishes that we will study.

The next section deals with how this institutional change may had an impact in the way people were taking decisions about their family size.

#### 4.3 Leibenstein's notions of human fertility behaviour

It is a notion being taken in this study of enclosures that humans are directly restrained by the environment they live in. Economic, social, and institutional forces have an effect on the perceptions individuals have and these perceptions in turn influence the

decisions they take in their environment. Economic decisions made by rational individuals should take into account changes in that environment the individual is facing. In order to make the most of that decision, the individual must account for the benefits and costs of the change that the decision will bring up, this kind of behaviour typically labeled as *homo economicus*. If a change in institutional factors has an influence on social spectrum it may be logical to think that that change in social spectrum would have an impact on the decisions made by the individuals. Economic decisions, or in the context we are dealing with, demographic decisions concerning fertility behavior.

Therefore, it is in this respect that Harvey Leibenstein's essay (1981) is a useful framework for our analysis. The reader may be wondering why this kind of theory would be applicable to a study of land enclosures. The answer is simple: we are dealing with a decision embedded in people's minds (about family size) and the notions of Leibenstein are a useful framework to link our main hypothesis with the incentives that the change in property rights may had led the inhabitants of Skane to see as a viable option to increase their demand for children.

The argument of Leibenstein lies with the microeconomic term of 'maximization' and its power to explain how this concept influences the decision-making process of human fertility (Leibenstein, pp 381). The author is quite emphatic in distinguishing between *active* and *passive* decision-making. Passive decision making is a process that is usually done in our everyday lives and it well involves a great deal of routine behaviour. However, if there is an event that in certain way has a profound impact on the way individuals assess their decisions, these individuals then direct their attention to that event and they become *active* on the way they will take a decision.

It is in this respect that we think that the enclosures are related to the decision making process. The enclosures represented a change in the way agriculture was carried out, and this change had an impact in the everyday lives of individuals. Therefore, we can easily connect this concept with the notion that the populations we will study in this thesis were affected in such a way by the enclosures that they became active in the way they were assessing their environment. Moreover, we have claimed that this change would have had the effect of seeing a profitable future, therefore, an active decision

taking into account these ideas, could have led to either a decision to restrict family, or to expand the family size.

#### 4.4 Geoffrey McNicoll's institutional determinants of fertility

This small section is introduced in this thesis due to the fact that it is the only paper, to my knowledge, that explicitly wants to merge the insights of institutional economics and try to apply them to the study of fertility decisions. It should be noted that the author of this article poses more a challenge, than a solution; and that the way he explores the interconnection between institutional economics and demographic research pertaining fertility is somewhat unclear.

McNicoll's writings have been focused on the fertility decline of the so-called third world (references), and in his analysis he has tried to explain this facts giving attention to the social and economic settings in which the decline is observed. Specifically, he has sketched ways in which institutional settings influence are taken into account when analyzing fertility decisions. He tries to add to the fertility theories the notions of bounded rationality devised by Herbert Simon. As other authors, he gives weight in fertility decisions to the costs of bearing children, but he says that changes in institutional arrangements can be seen to elicit changes in individual behaviour (McNicoll, pp443). So he says that these institutional settings are those that are given by the broad political systems, and also those that come from the transactions between individuals in society.

In a more broad sense, McNicoll poses the research question of how institutional settings have an influence in the way couples decide on their fertility decisions. This author gives special emphasis to the transaction costs notion of institutional economics (which should be defined in the next section) and how this structure may have an effect on fertility decisions. The author places importance to the fact that local economies should be studied as they are interrelated in a process of exchange with the families living in that economy. Transactions occur between the economy and the family, and the family is perceived as a "social device for minimizing a broad array of transaction costs" (McNicoll, pp 455).

Furthermore, the author says that if in some society there is some institutional change, it should be understood under the framework of the transaction costs notion, however, he says that analyzing the precise way in which the institutional framework, in a more abstract sense, influences fertility decisions is not very straightforward, in part due to the lack of direct data to measure institutional change.

#### 4.5 Field systems

##### Theoretical departure for the analysis of Enclosures

Using the framework of New Institutional Economics to characterize the field systems in the past is not a new thing. Hopcroft (2003) has done this kind of work studying several countries and this thesis will support its arguments with some of her ideas.

But before going into this discussion, it is imperative to define institutions in the way one of the most influential thinkers in this area of economics thought it, for Douglas North, institutions are “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction...institutional change shapes the way societies evolve through time and hence in the key to understanding institutional change” (North, pp 3).

Having defined institutions *a la North*, we should say that we think this is a useful theoretical and general framework to characterize the enclosure movement in Skane. Furthermore, the conceptions of field systems provided by Rosemary Hopcroft (2003) provide us with a sound theoretical background on the institutional economics of agricultural systems. In her research, the author makes a division of field systems in Europe in the past; and in doing so, her terminology says that there were two kinds of field systems; *communal fields*, and *less communal fields*.

She defines communal fields as those where the agriculture production was carried in big open fields and where these were farmed collectively.

The less communal fields were the ones that its main feature was the private owned land, and where there was nearly no communal participation in the farming of the land. The main features of this kind of land management were that they were completely

fenced, which in turn gave the landscape a view of a more organized and delicate aspect.

### *Field systems and Local Cultures*

For Hopcroft, the field systems “were a product of cultural complexes within regions that exhibited related manifestations” (Hopcroft, pp 32). The author argues that in the open field system, the agriculture in general was carried out with a strong sense of communitarism. Life in the villages was centered on community life; these were manifested in for example village celebrations, a strong influence of the church in the inhabitants. The author says that most of these kinds of villages were mainly Catholic.

Instead, for the field systems which were enclosed, a main feature was the particular individualism of the inhabitants of these regions. The author mentions the case of certain regions of England and France (Hopcroft, pp 33).

One argument to say that the open field system was not efficient is the one that claims that due to the fact that land was owned communally, the agriculturiers did not have the incentives to do an effort to produce more, on the other hand; the enclosed fields were a system where the property rights of individuals were more secure and they could be more certain that their effort would pay in the future by enjoying the profits made out of their production.

In addition to this, Hopcroft argues that such institutional rules provided by the enclosure laws was the only condition that had to be met in order to have a system of private property with more defined and secure property rights, she argues that it was also necessary a set of institutions at the local level (Hopcroft, pp 27). These local institutions are related to how relations in the societal context where enclosure took place were shaping the way enclosures were shaping the new field system; moreover, these set of local institutions would also have an influence in the effects of the new land management and production system.

Following the definition of institutions by North, we can say that field systems were the product of both formal and informal rules; and that the enclosure movements altered the transaction costs and also reduced uncertainty which was one feature of the old open field systems. The uncertainty which we are referring to is the one that has to do with the lack of freedom of the farmers to do what they wanted with their land in the pursue of more economic benefits.

The new institutional economics framework is useful in this thesis because one of the cores of these strands of economic theory is the one that says that institutions have a big influence in shaping the way economic development occurs at a certain point in time by influencing uncertainty and transaction costs.

Transaction costs include costs of defining and enforcing property rights (North, 1990). According to this theory, the clear definition of property rights reduces uncertainty and provides a basis to lower transaction costs in economic activity.

In agricultural systems, this framework can be applied in comparing the open field system, and the enclosed one. In the old open field system, transaction costs were high and uncertainty was high as well, whereas in the enclosed system, these were low because property right were rightly defined and the enforcing of these property rights was well defined too.

The notion that there was less uncertainty and lower transaction costs in the enclosed systems stems from the fact that land was privately managed; the fences that were built to set the limits of the farm were a mechanism that served as well as protection.

So, what can we learn from the theoretical overview given above and how we expect to relate it to our study of enclosures?

We believe the main theoretical positions given in the last sections provide a support for our own theoretical argument stating that the enclosure movement gave peasants the incentives to increase their family size due to an increased demand for labour at home, and also through the perception of a somewhat more profitable future.

The notions of Veblen regarding the human actor and his relationship with its environment provide us with a way of support to our argument, saying that individuals

are everyday learners and they take into account whatever changes in the social superstructures where they live in. In regard to Leibenstein notion of decision-making process about fertility, we can say that our individuals subject of study in this thesis were affected by a change in institutional norms which made them act in an *active* way. This easily connects with Caldwell's intergenerational wealth flow theory in which children in pretransitional settings were more seen as an asset due to their contribution to labour inside the family.

Therefore, we can repeat now the main hypothesis given in the beginning of this thesis and provide some expectations in the empirical analysis to be carried out in the next section:

1. Was there any observable impact in total fertility rates after enclosure took place?
2. Were there any differences between parishes depending of their economic structure, i.e. manorial or freeholders?

It is our hypothesis that we will observe an increase in the total fertility rate after enclosure took place because of the reasons aforementioned (increased perception of economic gains, more demand for labour inside the family). We should emphasize that we do not expect to see large differences between the freeholders and manorial parishes due to the fact that the gains from enclosure could have well been perceived in a similar way, therefore, we expect to see an increase in total fertility rate for both types of parishes.

Having said this, we now proceed to describe our data and then we will present and discuss the main results found in the analysis which was rather basic, but we could claim it could well raise the interest of researchers to do more detailed analysis regarding this important event in Swedish economic history.

## 5. Data and area of study

Sweden is characterized by the flawless quality of its historical population registers. This feature comes from the fact that since 1748 it was required that priests should report every five years data on births and deaths, age structure, civil status, occupational distribution, and net migration (Alm Stenflo, pp 212). This database (“Tabellverket på nätet”) is now digitalized and it is given by the Demographic Data Base of Umea University, which contains information of the parishes for this study, starting in 1749 and ending in 1859<sup>1</sup>.

The dataset contains information on totals of population by gender, number of births in a given month, and age of the mother when giving birth. This exceptional data was used to construct the age-specific fertility rates and, based on these; the total fertility rates were obtained.

One issue that was encountered while collecting the data was that there was missing information for certain census years and another problem was that some parishes were merged from one census year to the other. Therefore, it is impossible to differentiate which population belongs to the parishes merged; this is why the parishes were also united in this analysis for the whole period.

The parishes for which there was missing information were the following: Hög, Sankt Ibb, and Sankt Peters Closter. The years that did not contain data were 1800, 1820, and 1790 and 1800 respectively. For the former two parishes this does not mean big trouble since they were enclosed quite late, however, for Hög this poses a problem since the parish was enclosed in 1803, therefore; we took the mean of 1795 and 1810 to solve this problem of missing data.

Additionally, the parishes for which the data had to be merged were the following: Hög/Kavlinge, Vastra Karaby/Saxtorp; Haslöv/Bodarp. The fact that these parishes had to be taken as one observation does not pose significant problems since they were

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<sup>1</sup> Available in: <http://www.ddb.umu.se/tabellverk>

enclosed on the same year and they are really closed to each other. Moreover, the parishes have the same economic structure, i.e. manorial or freehold land.

The information regarding the year that the parishes were enclosed was obtained from the Historical Database of Scanian Agriculture and was kindly given by Mats Olsson and Patrick Svensson, professors in the economic history department of Lund University.

The total number of parishes to be analyzed in this thesis is twenty, and of these, twelve have a peasant structure; six are manorial; and two are a mix of these categories

The economic structure of the parish should not be that important for the hypothesis that wants to be tested, since in either manorial or freeholders parishes the peasants would have seen it profitable to enclose their lands; even if manorial peasants' property rights were not as strong as the ones of the freeholders.

### *Method*

The method applied in this thesis is quite basic and therefore, the results given in the next section should be interpreted with care. However, the main aim is to see the trend in total fertility rate before, and most importantly, after enclosure took place. This will be represented in graphs where we will show the development of the TFR's before and after enclosure. At least five years before and after enclosure. This approach makes it possible to see how TFR changed in the following years after enclosure of the parish was completed. The whole process of enclosure took time, therefore, we would expect to see the change in TFR, if any, some years after the enclosure year.

The aim of the graphs to be presented below was that it should be self-explicative. The information regarding the year that the parish was enclosed is clearly stated, and therefore, we are able to observe the pattern of change in TFR after enclosure year. And then we would proceed to describe the trend and then try to offer an explanation based on our previous theoretical framework.

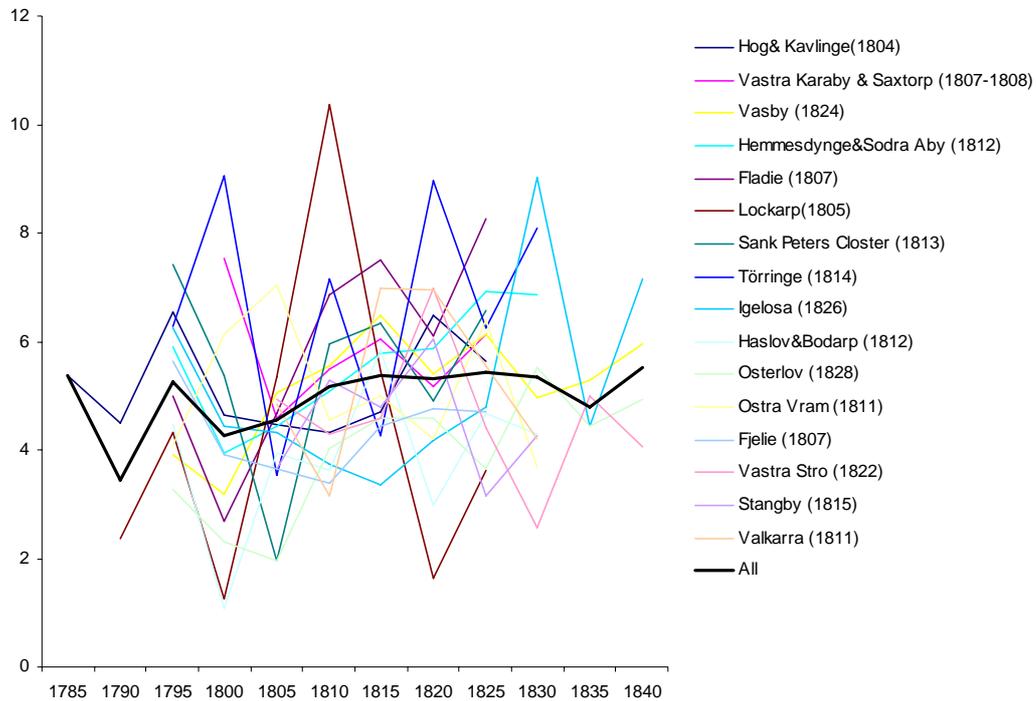
An additional analysis, besides of presenting the parishes in calendar year; was to set the enclosure year to 0 and in that way, we can see more clearly if there was really some increase or decrease in TFR right after enclosure. This approach was taken due to the fact that the parishes show diverging trends in the years they were enclosed. Most of them were enclosed around the same year, but some others were enclosed later. Therefore, these graphs should be as well very informative about the process we aim to explain in this thesis.

## **6. Results**

In this section we will present the graphs regarding the trend in Total Fertility Rates for the parishes the parishes before and after enclosure to see whether there are visible signs of change after the year that enclosure took place.

We will not present single graphs for each parish due to the fact that it would not be so informative about the general trend found in the analysis, instead, we will present graphs showing the whole sample of parishes, and then, we will present the sub sample of parishes divided in terms of its economic structure. I.e. manorial or freeholders dominated.

**Graph 1. TFR for all parishes (calendar time)**



What can be seen from the graph above is that in general, there is an erratic movement in the TFR if we look at individual parishes. It might not be so clear to see from this graph whether TFR increased or decreased after enclosure; however, when we did the analysis parish by parish, we saw that there was an increase in TFR for nearly all parishes with the exception of Hög/Kävlinge, Törringe, Fjelie, and Vastra Strö.

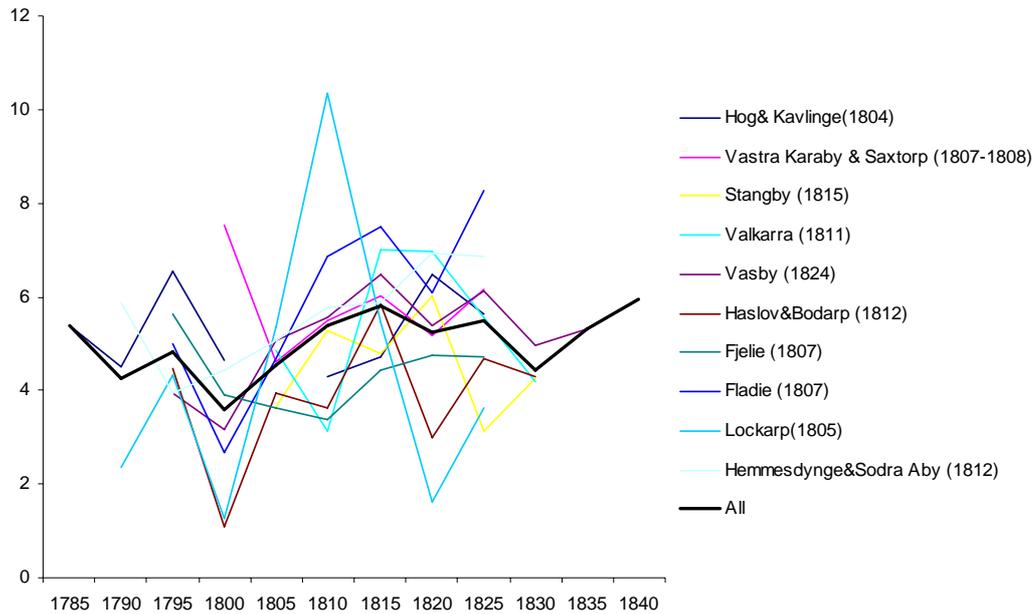
At this respect we should mention that in the period 1800-1810 (period when Hög/Kävlinge and Fjelie were enclosed) Sweden was affected by the Napoleonic wars and this brought economic difficulties in the county, therefore, it is not very surprising that the TFR experienced a decrease after enclosure. For the other two parishes, which were enclosed later, we do not have an explicit answer to why TFR did not increase as it increased for the rest of the sample; however, we can speculate a little bit and say that people living in those parishes did not see as beneficial an enlargement in their family size.

As it can not be seen very clear whether TFR increased or decreased, we calculated the mean for all the parishes and this can be observed in the thick black line in the graph. Most of the parishes were enclosed between 1803 and 1815. If we look at this time in the graph, we can clearly see an upswing in the average of total fertility rates for all the parishes after enclosure took place. This is an interesting result and it is according to our initial expectations. We should say this finding is not surprising due to its relationship with both demographic and institutional economics theory.

We can claim that in that specific time in history, individuals foresaw a profitable future regarding the change in the incentives regarding the use of land and they could have thought that bearing more children, and putting them to work in the land, as was more the norm in pre-industrial societies, could have been a rational decision in that precise time. We can not claim that enclosures were the only factor involving a slight increase in TFR after this took place; there could have been other factors influencing them, and this could also be due to a statistical artifact of small sample size.

Now we turn to look at the development of the total fertility rate differentiating parishes in terms of its economic structure. First, we will look at the parishes dominated by freeholders. We have said that freeholders had more strong property rights than peasants in manorial parishes; therefore, we would expect that the upswing in fertility rates should be quite noticeable when we look at only these parishes.

**Graph 2.TFR's for peasant parishes (calendar time)**

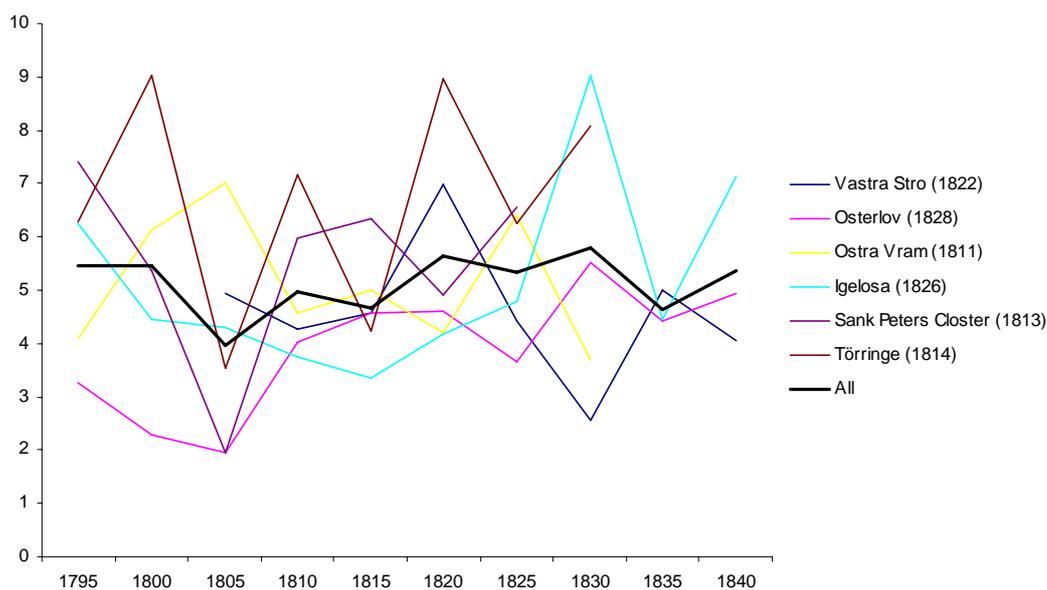


Graph 2 shows the pattern that total fertility rate shows for freeholders parishes. We should first emphasize when enclosure took place in these parishes. As can be seen in the information provided in the graph, the period when most of the parishes were enclosed ranges from 1804-1812. Vasby was enclosed quite later (1824), however, if we want to see the development of the fertility rate we should focus in the period between 1805 and 1815.

It is quite clear from the graphical description provided that, in average, all parishes showed an increase in the total fertility rate between 1805 and 1815. The increase is quite steep and this is another result that calls for the attention of historical demographers. What is shown here is a quite strong upswing following enclosures and during enclosures. This finding should be also interpreted with care, since most of the parishes were quite small and this could lead to a “small numbers” problem, however, taking it as a total (in the black thick line) it is clearly seen that individuals increased their fertility. We are not claiming that it was just because of enclosure, however, we believe it exerted certain influence in the timing of births of that epoch.

Now, we turn to see the results for the manorial parishes. A reasonable expectation for this parishes would be that individuals would not increase their fertility because their property rights were not as strongly defined as those of the freeholders parishes; however, we believe that even in these parishes, individuals could have foreseen a profitable future; and we should not disregard the possibility that the inhabitants of these parishes were aware of the development of enclosures in peasant parishes and therefore they could have seen it as advantageous to now belong to the enclosed field system.

**Graph 3. TFR's for manorial parishes (calendar time)**



This sub sample of parishes poses a somewhat more difficult interpretation if we only look at the general average for all the parishes due to the fact that the dates when they were enclosed differ for quite some years within. What we suggest in order to have an idea of the trend that the total fertility followed is to look at two different periods. We should look from 1815 – 1820 which is a period when three parishes were enclosed, and then, we could proceed to look at the period 1825-1830, when the rest of the parishes were enclosed.

As with the peasant parishes, we can see that the total fertility rate increases in both sub-periods we are looking at. The increase is not as noticeable as with peasant parishes, but

we can see a slight increase. This is another result which proves to be interesting and it provides a glimpse of understanding of how individuals were behaving in terms of family formation patterns.

Now we proceed to a different way of looking at the graphs we presented above. In order to view these results more thoroughly we have made a change in the scale on how the enclosure took place. We defined as time “0” the time when enclosure took place in all the parishes in order to see more closely if the total fertility rate shows a marked increase or if it is not that noticeable. This change in the scale serves also as a proof test in order to see if the general pattern that we saw on the calendar time remains intact.

**Graph 4. Total Fertility Rates for all parishes (standardized time)**

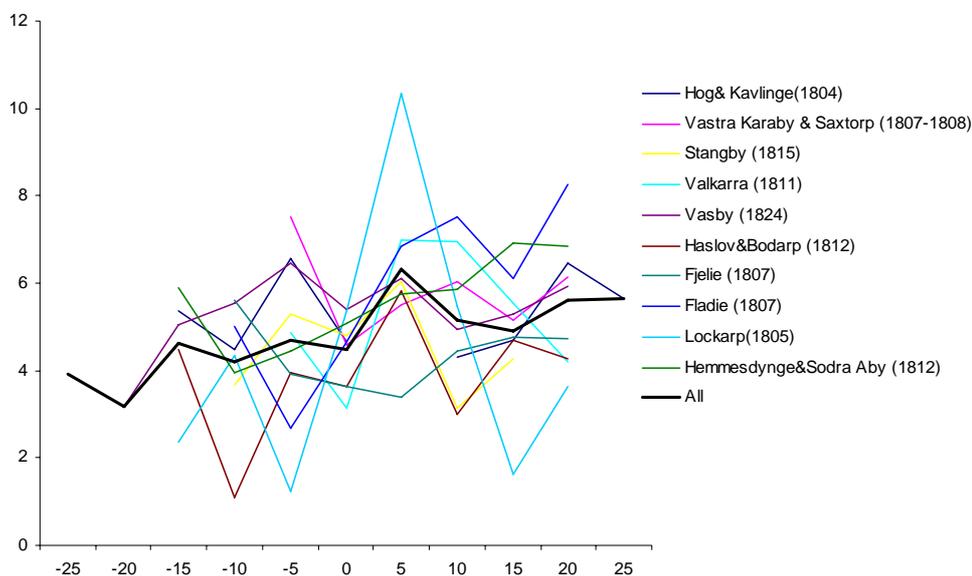


Graph 4 shows the total fertility rates for all the parishes in the standardized timing we aforementioned. What is remarkable of this type of graphical analysis is that we are looking only at the effect of enclosure directly after it took place. The results we see are not contradicted by what we saw before; on the contrary, our results are more confirmed now, since we can see that, on average, parishes increased their total fertility rates from 4.72 children per woman before enclosure, to 6.26 children per woman after enclosure. This is a remarkable finding and it shows that there was an effect of enclosures in the

decisions of individuals regarding their family size. The increase is one and a half children per woman on average, a result that would seem plausible if we think that our sub periods are of five years.

Now we turn to see the same type of graphical analysis for the sub-sample of parishes we have. In graph 5 we can observe the total fertility rate for peasant parishes in the standardized-enclosure time.

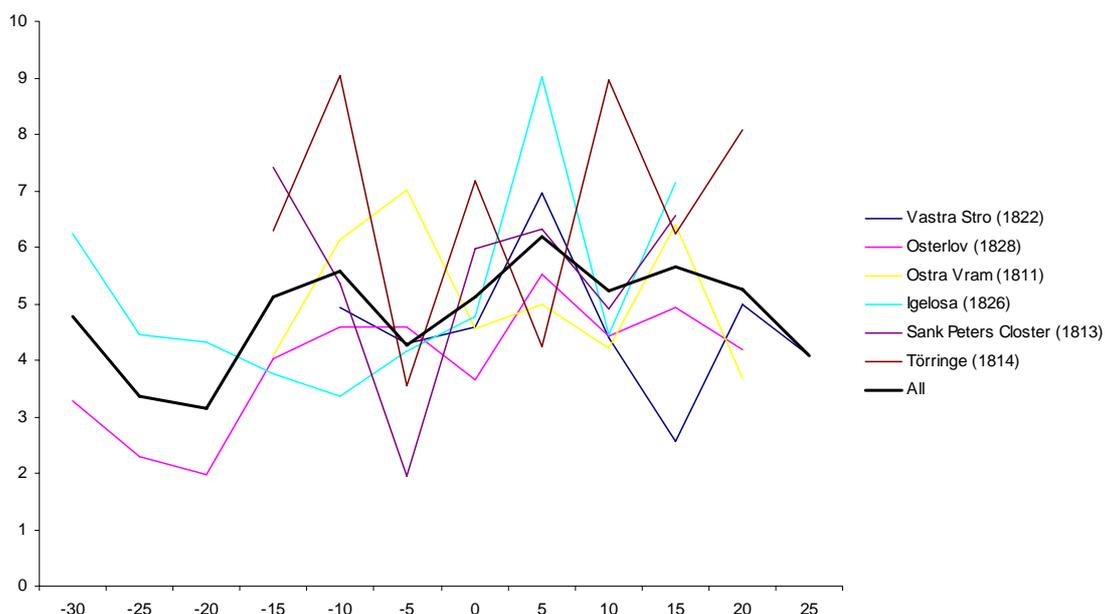
**Graph 5. Total Fertility Rate for Peasant Parishes (standarized time)**



From the graph above which shows in standardized-enclosure time we can clearly see that the increase in total fertility rate is strong, ranging from 4.50 children per woman before enclosure, to 6.31 after enclosure. This result is under expectations and it shows an increase of nearly two children per woman. Furthermore, the result serves as support to the findings when we used the normal calendar time.

Now we turn to do the same graphical analysis for the manorial parishes. The results are shown in graph 6.

**Graph 6. Total Fertility Rates for Manorial Parishes (standardized time)**



From the graphical depiction shown above for the manorial parishes, we can see that the total fertility rate also increases, as with the freeholders parishes, but the increase is slightly lower. The TFR increases from 5.12 to 6.12. On average, women were bearing one more children after enclosure took place.

The analysis provided in this section and its results confirm in a way our hypothesis that individuals should increase their fertility after enclosure took place because they foresaw benefits derived from this change in land use.

The following section will provide a discussion related to the theoretical framework and then we offer a conclusion.

## **7. Discussion of the results and their connection to the theoretical framework**

The hypothesis we aimed to test in this thesis showed support from the rather basic methods we used. Relating these findings with our theoretical framework is the task to be undertaken in this section.

What we observed from the analysis of the total fertility rate after enclosure was a somewhat surprising but expected result. We clearly saw an upswing trend in TFR some years after enclosure was carried out. The increasing trend in TFR was seen for all the sample of parishes and also when we divided them in terms of their economic structure. We saw that for the freeholders dominated parishes the increase in total fertility rate was bigger than for manorial parishes. This result is not surprising since the peasants living in manorial lands did not have as strong and defined property rights as those living in freeholders areas. The rapid and large increase in TFR after enclosure in peasant parishes could well be related to the perceptions individuals had about the profits they would see from a larger family.

In the beginning of this thesis we stated that the change in property rights caused by the enclosure movement and the possible economic benefits from this change may had an effect in the way families in our rural parishes were perceiving the relative costs of childbearing. Our main result from the analysis of total fertility rate was an increase in this after enclosure took place. The possible mechanisms through which this social and economic phenomena may had an influence in individuals to increase their fertility seems to be straightforward using the theories we provided early in this thesis.

The most obvious theoretical connection with our results is that of John Caldwell and its intergenerational wealth flows theory. It was stated that this theory posed the premise that preindustrial societies perceived children as assets, both as an tangible and intangible goods; therefore, it should come as no surprise that our finding regarding the increase in total fertility rate after enclosure could be a reinforcing mechanism in the perceptions of individuals when planning the numeracy of their families.

In our theoretical framework we also attempted to make the argument that the institutional environment humans live may have an impact to the process of decision making regarding family size using the notions of Harvey Leibenstein. This framework provides a useful basis to support the results we found in our empirical analysis in the sense that they acted in an *active* way.

As we have said, Caldwell's theory of intergenerational wealth flows serves a basic connection and useful explanation to our results. We should not forget that we dealt with a population that it is believed that was not practicing family control in a deliberate way. However, our results point to the direction that our individuals under study may had an idea about the future in their environment that made them think that it was probably rational and profitable to increase their family size. Therefore, we can easily connect this to the active decision making process of Leibenstein; a process that according to him was in a way influenced by an event which would have a profound impact in the way individuals assess their environment

Additionally, we can as well connect in a quite straightforward manner our results and the argument we want to make with Veblen's ideas of the 'economic life process'. Seeing this way, it is not irrational to think that the cumulative life experiences that the individuals living in the parishes of our study made them adapt to the changing circumstances that enclosures involved. What we think it is relevant, is that the actors of our story were well aware of the changes that were occurring and they were as well adapting in a rational as a response to the changing institutional structures that were governing them.

From another perspective, we could also claim that enclosures and the change these brought in the way agriculture was carried out, can be easily connected as well to Esther Boserup's notion of intensification of land use because of population growth. Boserup was not a believer in the notions of the population pressure to agriculture and food production, she was more of the idea that population growth was a cause to agricultural change through an intensification of the use of land, through the creation of technology in agriculture (Grigg, 67). Our study of enclosures mentioned in the introduction that there was a strong population rise from 1750-1850, which is the period when enclosures took place, therefore, we could argue that this idea of Boserup could probably find a support in the enclosure movement of Scania due to the fact that agriculture was carried out in a more advanced manner compared to the previous century and this led to an increase in productivity as well (Svensson, 2008).

So, we can see that attempt we embarked on to study and analyze with a broad theoretical framework could well connect with both the enclosure movement, and with its influence it may had on fertility rates.

## **8. Conclusion**

The main aim of this thesis was to study if there was an effect of the enclosure movements in Southern Sweden in fertility outcomes. In order to do this, we did a micro-study of twenty parishes located in the area of Skane and we calculated the total fertility rates for the period comprising 1785-1840. The results we found were that some years after enclosure took place in the parishes, the total fertility rate increased. The increase in the total fertility rate was more noticeable for the peasant parishes, while for the manorial parishes the increase was more modest.

As we have aforementioned, these results should also be interpreted with care since the parishes we studied were quite small regarding population totals, and this fact could lead to an erroneous picture of what happened. Furthermore, we only analyzed the total fertility rate. We could not analyze marital fertility due to data availability and we think that a study making use of marital fertility data would elucidate in a more comprehensive manner if the results we obtained in this study would be confirmed. Moreover, we were also not able to have any measure of spacing behaviour in the populations under study. Additionally, we were not able to differentiate the total fertility rate between social groups, i.e. landed, landless or semilandless. Therefore, we could say that our results are far from being conclusive with the premise set forth in this thesis, which was that peasants would increase their fertility due to the perceived improvement in economic gains derived from the enclosure movement.

Nevertheless, these results may reveal a pattern of behaviour of rural peasants of the past that could be considered as logical due to the circumstances in which they were living. Enclosures probably increased the material aspirations of the peasants who owned their land and this also could have led them to bear more children; since at the time of analysis, education for children was still not universal; therefore, the decision to

bear more children could have been seen as an investment option in order to increase profits and not to rely on external supply of labour.

In addition to what has been said previously, it is our conviction that these results offer a glimpse at a phenomenon that was not researched with this focus in the past. To our knowledge, there has not been previously a study trying to connect the possible effect of the enclosure movement in fertility behaviour. This lacuna in Swedish historical demography set the basis for this study that tried to see the effect of this social and economic phenomenon in fertility decisions of individuals who were subject to this change in land ownership and land use.

The preliminary results found in this thesis call for the attention of probably doing more detailed studies with more parishes in Skane in order to arrive at more firm results concerning the relationship between population and enclosures. Our results may connect with the findings of Bengtsson and Dribe (2006, forthcoming) where they found that social groups in adverse conditions were adjusting their fertility in a decreasing way as a deliberate action in response to harsh economic times. Our study of enclosures could provide a basis to study in more detail whether peasants in privileged socioeconomic position were increasing their fertility as a response to the perceived profit from enclosures.

However, it is on my own perception that isolating the effects of enclosures in an empirical statistical model would be quite difficult to attain. Therefore, I would suggest that if possible, it would be a good idea to look at testimonies of women and men regarding their perceptions regarding family life; as well it would be informative to look if there were any publications made by the clergymen regarding family practices. A combination of qualitative and quantitative methods to study the motivations of individuals to have family would be quite informative about the possible effect of enclosures in fertility decisions. This is naturally not simple to do due to the fact of data availability.

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