The Socio-Economic Impact of the Pax Romana and Augustus' Policy Reforms on the Roman Provinces

by

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Chapter 1: Introduction

1.1 Motivation for the Study

The reign of Augustus represents the most pivotal period of all Roman history. As such it also represents a unique period of peace and sustained economic growth throughout the Roman Empire and in particular the Roman provinces. Whilst Augustus' reforms were rarely implemented with a view to their economic impact (Scullard 1979: 333) the results were profound.

Augustus' primary motives for instituting his various reforms were for the rationalisation and consolidation of his new Empire. He had begun his reign by conquering more territory than anyone before or after him, however, as Mommsen (1996: 115) points out, "a policy of conquest as such was not feasible under the [P]rincipate". Thus, peace was never an end in itself so much as a by-product of Augustus' inability to sustain a policy of conquest. The reforms that were then instituted over the new provinces were therefore implemented in order to consolidate these new territories into the Roman Empire. Added to this is the manner in which the Emperor then simplified the administration of his empire by standardising the new policies throughout all the provinces, both old and new (except Egypt) and then made all the provincial governors directly accountable to him (Richardson 1984: 61). However, none of these reforms would have been as effective or in some cases even possible, if they had not been implemented in a time of peace.

As Scullard (1979: 333) points out, the primary difference between the republic and the early empire "was the establishment of the *pax Romana*: no longer were wars or civil strife to be allowed to strike crippling blows at the economic life of the community. By developing the political unity of the Mediterranean world, Augustus thereby created the conditions for its economic unification. Given peace, the economic prosperity of the empire would take care of itself."

It is this constant reference to the positive effect of peace (by writers such as Finley, Jones and Scullard) and unintentionally benevolent reform on an economy that begs further investigation. This effect is most apparent in the provinces, which had been recently conquered and were often under-developed (in comparison to the Romans) tribal cultures. The motivation for this study is therefore the following: whilst numerous eminent historians have described the benefits of the *pax Romana* in conjunction with Augustus' reforms, none of them adequately discuss how these considerations had such an effect on the peoples involved and thus, by extension, on the economy.

1.2 Research Problem

A cursory reading of the available literature on the Roman economy and the social conditions in the time of the early empire reveals several problematic areas. The field of economics is a relatively recent one, with the establishment of the topic as a distinct field of academic enquiry only occurring within the last 500 years (Brue 2000: 3). Thus, while ideas regarding the economy and its workings were pondered, there is not a single source from the ancient world that dealt completely with this topic during their time. Hence, there are no primary sources with direct applicability.

The secondary sources have drawn what they could from the primary sources, but they focus primarily on the results of the *pax Romana* and the reforms. An inductive analysis of these texts would lead to a better comprehension of the effects that the reforms and the peace had in the provinces. A deductive analysis using economic concepts would better explain how the measures that were implemented were able to create the necessary conditions for sustained economic growth and how peace would affect these same conditions, even though "[i]t is questionable whether present discourse and concerns are capable of capturing the ancient experience" (Bang 2007: 4). These secondary sources are, however, primarily Positivist in nature, whilst this study aims to use Constructionist[1] methodology.

Although the political environments are very different, the study of how peace and reforms are able to create a positive economic environment has a particular relevance in the current world. Africa is currently viewed as a continent of failed opportunities, filled with potential but crippled by wars. With many areas in Africa in a state similar to those of the Roman provinces before their incorporation, it is hoped that such a study might present a better understanding of how simple measures and peace could lift these areas out of dire poverty, as they were able to do in Roman times.

1.3 Research Approach

The approach of this study is to combine the explicit and implicit knowledge contained in both primary and secondary sources with regards to the *pax Romana* and Augustus' policy reforms with reference to their economic impact. This will be undertaken using constructionist methodology as described by Tosh, whilst combining the different fields of economics and history in the vein of the *Annales*[2] school. Tosh recognises that there are no truly objective sources (or historians), merely versions of history that are, usually, unintentionally tainted by the writer's own personal prejudices and bias (Tosh 2000: 113). However, this does not make these sources irrelevant as long as their subjectivity is acknowledged.

Important in this study and its constructionist epistemology, is the acknowledgement that it will also be subjective and biased due to the author's past education and personal

[1] " Constructionist history… may be best considered as a self-conscious description of the variety of ways available to understand the past, ways that recognise the epistemological, methodological and narrativist impositions made by professional historians." (Munslow 2000: 55)
[2] The *Annales* school was founded by Marc Bloch and Lucien Febvre in 1929 and sought a "total history" which would explain all aspects of the past; they sought to achieve this by working in collaboration with other scientific disciplines such as economics.

worldviews. Regardless, the result of this approach should lead to a more complete understanding of the dynamic effect of the *pax Romana* in combination with Augustus' policy reforms on the provinces and how they may have relevance for impoverished regions of Africa.

1.4 Method

Using a qualitative approach, an analysis of mainly secondary sources will form the basis of the study. Sources will then be grouped into units which all explore the same focus area, whether with regards to the *pax Romana* or the relevant reforms. It is at this point that a single conception of the unit of analysis will be induced from all these sources and economic concepts will be applied to this conception in order to deduce the probable socio-economic conditions in either trade and industry or agriculture. The conclusions will be nomothetic[3] in nature.

Constructionist methodology will be used throughout the analysis as envisaged by Tosh (2000). This methodology will also be used within the context of the *Annales* school, which sought to broaden the field of historical enquiry through inter-disciplinary studies such as the historical-economic study envisaged in this proposal.

The predominantly empirical sources will also be analysed in order to better understand the reasons behind each of Augustus' policy reforms and their intended results. The possible effects of the *pax Romana* on each industry in isolation will also be investigated through constructionist epistemology.

[3] Nomothetic describes an explanation that is more general in nature. A nomothetic explanation thus settles for a partial rather than full explanation due to the complex relationship between the variables of analysis. Due to the lack of sufficient evidence in this study a nomothetic explanation is the only explanation possible.

The first two, primary chapters (that concern the Roman economy) will be followed by a study that will focus on using the insights gained through these chapters to distil techniques that were employed in the Roman provinces, which might be of value to under-developed African communities.

1.5 Outline of the study

The study will be divided into three primary sections. The first section will involve a thorough discussion of Roman agriculture, which comprised the vast majority of the Roman economy (Duncan-Jones 1982: 33). The second section will deal with Roman trade and industry. In each of these first two sections there will be an analysis of the effect that the *pax Romana* and Augustus' policy reforms may have had on various aspects of the Roman provincial economy. The final section will deal with how the lessons gleaned from the first two sections of the study might be applied to modern Africa.

The chapter on agriculture is divided into seven primary focus areas that would have had the greatest effect on the field of agriculture. These areas include concepts such as land distribution, crop yields and the idea of land as an investment. They will also include an analysis of the impact of tax reforms, veterans and colonists, as well as the imperial *annona*. A final section will deal with the Roman province of Egypt as a distinctly separate province under the direct control of Augustus.

The field of trade and industry will be separated into six distinct areas of concern. Whilst many of the areas discussed in the chapter concerning agriculture have application in the area of trade and industry, there are several other areas that have a greater affect on trade or industry than they have on agriculture. The six sub-sections are thus divided into those that had a direct impact, such as trade barriers, the use of a single currency, infrastructure and transportation and those that had an indirect impact such as the Roman attitude towards trade (contained in the section on industry versus agriculture) and the use of slaves.

The final section concerning Africa will deal with aspects of the Roman economy that could give guidance in the contemporary growth of the African economy. Important aspects such as the role of peace and good leadership are discussed alongside sections on agriculture, trade and industry, the market and policy reform.

Chapter 2: Agriculture

2.1 Introduction

Although the exact proportions are highly debated, all sources regard agriculture as the largest sector of the Roman economy by far (Duncan-Jones 1982: 33 and Jongman 2002: 31). It is the only sector of the economy in which one finds the upper and lower classes actively involved, whether it be the subsistence farmer working a small plot or the aristocratic, absentee landlord employing thousands of slaves on vast estates (Finley 1985: 44). Agriculture was viewed by the upper classes as being one of the few 'proper' employments through which people of such status might occupy themselves (Finley 1985: 58)[4]. Although most of them never actually worked on their farms, they needed the profit derived from their crops to fund their lavish lifestyles in Rome or the various regional cities (Alföldy 1985: 116).

Augustus brought into the Roman sphere huge new areas, which were sectioned into separate administrative provinces by means of the *lex provinciae* (these included many old laws such as the *lex Pompeia*, *lex Rupilia*, *lex Cornelia*, *lex agraria* and the *lex Livia*) (Lintott 1993: 30). It is in these provinces that the most discernable changes in agriculture occurred. These changes were driven by peace and the various policy reforms that brought in a systematic tax regimen and permanently stationed Roman troops and colonists (Francis 1914: 125). The new cash based tax system resulted in the farmers entering the market, often for the first time, in order to sell enough produce to cover their tax obligation unless the authorities requested payment-in-kind for the imperial corn supply (Lintott 1993: 95). It was this entrance into the more formal regional market, along with the arrival of new colonists, their money and expertise that precipitated the economic boom of the first

[4] The "spell of Moses Finley" casts a long shadow over the study of the ancient Roman economy, with academics both for and against his arguments. For a contemporary discussion of these views, see Jongman 2002: 32 - 35.

century AD. However, none of this would have taken place if it were not for the *pax Romana* and the long-term stability that resulted from it.

It is important to state that due to the lack of sufficient sources with regard to this topic[5], this study is nomothetic in nature and all conclusions and reasoning are generalised and probabilities at best. This is done in the full knowledge that the different provinces had and still have vastly differing terrains and conditions and thus were not and are not equally arable. Unfortunately there is not enough archaeological information describing the conditions in all the different provinces during the period of investigation.

2.2 Land distribution

2.2.1 Basic overview

The question of land distribution is one that had been of concern to the Romans for more than a century before. The Gracchus brothers had recognised the inequitable distribution of agricultural land between the wealthy and the peasantry as being of paramount importance to the stability of the Roman Republic (Finley 1985: 80). The situation was exacerbated by the Roman notion that agriculture was the only virtuous trade that the upper classes could be involved in (Finley 1985: 58). Land was also seen as a safe store of wealth (Garnsey & Saller 1987: 44); the result of this preoccupation with land and agriculture is that the wealthy were constantly buying up as much land as they could to the detriment of the peasants and small landowners (Finley 1985: 58); a prime example of this action is Trimalchio, one of the main characters in Petronius' *Satyricon*[6].

[5] It would seem that there is simply not enough information on this topic at all (Erdkamp 1999: 556).
[6] Trimalchio is a fictional character (a phenomenally wealthy former slave) invented by Petronius satirising the newly rich and their excesses in comparison to the more understated old wealth. In the book Trimalchio is heard to say that he wishes to buy Sicily so that he may visit his estates in Africa without ever having to leave land that he owns.

Increasingly the lower classes were being pushed off their land as the rich often resorted to underhand methods in order to increase their holdings (Finley 1985: 102). Once the land belonged to the wealthy landowners, the new owners employed one of two options: either to lease the land to the peasant farmers in return for a fixed payment or proportion of the crop, or to employ their own gangs of slaves to work the land directly for them (Finley 1985: 92). The former case at least provided a possibility of continued employment in farming on a piece of familiar land, but it came at a high personal cost; they no longer had a legal claim to reside permanently on the land. In the case of the new owners employing slave labour, the position of the peasant was far worse as they lost their land and were unable to work on it either.

The above paragraphs describe two of the primary forms of land ownership during the end of the Republic and beginning of the period of Empire. The other forms are municipal ownership and the land that belongs to the emperor. The large-scale land holdings are collectively known as *latifundia* and consist of the vast estates of the wealthy (Finley 1985: 103). The emperor's holdings grew to incredible proportions and were worked through a combination of contract slave labour and tenant farmers (Petit 1976: 84). As Petit (1976: 82) shows, the *latifundia* grew on all fronts, whilst the municipal land remained relatively stable in size and the private land shrank as the *latifundia* incorporated it. However, it should be noted that small agricultural land holdings of the peasants at no point disappeared; they were in all likelihood actually the predominant form of ownership, in terms of numbers rather than overall size (Alföldy 1985: 145).

The description provided to this point is primarily concerned with land and agricultural practice in Italy. As such, it provides the backdrop to the use and exploitation of land and rural peasants by the wealthy Romans in Italy and its rural regions. The various types of Roman land ownership were also applied to the provinces (Scullard 1979: 334).

The new provinces presented differing levels of local administration over the ownership and use of land. Garnsey & Saller (1987: 66) and Hammond (1946: 65) refer to the fact that the eastern provinces were far more developed than their western counterparts. This is based on the civilisations that had previously administered these areas and the level of their sophistication. These civilisations were often far older than the Romans and their arable lands had been tilled for centuries, even millennia before their incorporation into the Roman Empire e.g. the Greeks and the Egyptians. The systems in place were usually not tampered with to any great extent by the new Roman masters, who recognised the efficiency of these systems (Finley 1985: 32). This sophistication had not reached the western areas of the Mediterranean to the same degree. As a result they represented a far greater opportunity for the wealthy Roman elite looking to expand their holdings. At the same time, the Roman administrators simply imposed their own systems on these new territories (Salmon 1968: 79 and Hammond 1946: 65).

2.2.2 The effect of the *pax Romana*

Whilst the establishment of peace in the now larger Roman Empire had little effect on the land distribution within the eastern provinces, apart from the transfer of land previously held by the ruling monarchs to the holdings of the emperor, the effect of peace was more pronounced in the western provinces (Scullard 1979: 334).

Peaceful conditions in the newly conquered western territories would have given confidence to the Roman elite and combined with their relatively undeveloped status may have represented an enticing investment opportunity. Garnsey & Saller (1987: 66) point to Seneca, himself a very rich man, as characterising the archetypal rich Roman as farming “land in all the provinces”. They also expect that senatorial provincial investment be “centred on the western part of the empire, which fell prey to foreign capital under the early Principate”. Thus, the distribution of land in the western provinces changed markedly from a predominance of small to medium farms towards vast, foreign owned estates. The position of the peasant farmers then changed drastically in two separate movements.

The first movement has been described above as Roman wealth quickly moved the rural peasants off their land and might be best described as the short-term effect of peace. This movement applies primarily in the western provinces due to reasons explained above. The second movement, however, applies to the entire Roman Empire including Italy. War, piracy and raids had been the primary sources of the constant supply of slaves that worked on the *latifundia*. Peace, and the suppression of piracy and banditry, therefore resulted in the near collapse of the slave trade and hence a shortage of slaves to work on the estates. The second, medium-term movement was thus to shift the working of land by slaves towards farming by tenants (Frank 1962: 356). So, whilst this fact does not change the distribution of land, it does at least afford the peasant the means to, once again, generate a livelihood.

2.2.3 The effect of policy reform

Augustus did not make any policy reforms with regard to land distribution, but there are several measures that he took, which played a role in increasing the viability of land in the provinces (primarily in the west) as investments. The measures that were applicable are concerned to varying degrees with maintaining stability in the provinces (Petit 1976: 82).

Thus, infrastructure such as roads and the establishment of a postal system would have made it far easier to supervise the new provinces from the cities where the wealthy preferred to reside[7]. Transportation by road[8] would have also lead to an increase in the possibilities of export. This topic is more fully discussed in a later section.

The presence of permanently stationed military contingents would have also inspired confidence that any investment made in these areas would be secure. The establishment of Roman colonies would have had much the same effect. As such, the combined effect of

[7] "Cities were the centres of civic administration, and the residences of the land-owning elite." (Jongman 2002: 28)
[8] See Finley 1985: 126-129 for a more thorough understanding of the Roman transport system.

these policies merely resulted in the confidence in the upper class to invest in the provinces. This confidence acted as the catalyst that caused the shift in land distribution.

2.3 *Tax reforms*

2.3.1 Basic Overview

Whilst there is abundant information with regards to taxation systems in the Roman Republic, Egypt and many other relatively developed civilisations, particularly of the eastern Mediterranean regions (such as Sicily and its *lex Heironica*), there is little information with regard to the predominantly tribal societies of the western regions (Lintott 1993: 75). Regardless, it may be logically assumed that these less developed regions made use of some form of taxation before their incorporation into the Roman Empire.

The taxation system of relevance to this study is that of the Roman Republic as applied to the provinces. There were two primary systems of taxation: the tithe or *stipendium* (and pasture dues) that were collected in the more unstable and tribal areas such as Gaul and Spain, and the *pactio* which were collected on by the notorious *publicani* (Jones 1974: 162). The *stipendium* was a fixed sum levied directly by the *praetor* or *quaestor* in the provinces that might have been dangerous for the *publicani* to work in. The *publicani* are not found in Gaul or Spain except as collectors of customs duties. The one exception is in Africa where the *stipendium* was collected by the *publicani,* but it seems that in this case the tax was effectively a poll tax[9] (Jones 1974: 162).

The *pactio* is the key operation in a system of taxation originally designed by the Sicilians and envisaged as an infallible way of collecting a fair tax for all farmers and tax collectors alike (Lintott 1993: 75). This system worked so well that the Romans copied the idea

[9] Poll taxes are fixed taxes that are applied to every person.

throughout the rest of the republic, other than the provinces where the *stipendium* was felt to be a better option. The system worked as follows: the tithe was sold annually (area by area and crop by crop), in public, to the highest bidder and the winning bidder then had to come to an agreement (*pactio*) with the farmers over the amount of the crop to be paid over. Lintott (1993: 75) suggests that there was an additional charge of either six or ten percent that was paid to the tax-collector as an administrative charge. In the case of a failure to reach agreement, the parties went to special fiscal courts (Jones 1974: 163).

The system did not take long to be corrupted as *censores* sold the tithes *en bloc* and the city authorities instead of the farmers agreed upon the *pactiones*. The sizes of the tax blocks being sold were then too large for anyone other than the wealthy Roman financiers to afford, as the sureties required were so large (Jones 1974: 164). These Roman financiers belonged to the equestrian class, which also happened to be both politically influential and in control of the criminal courts, including, most importantly, the court of extortion (Jones 1974: 164).

"Provincial governors therefore, wishing to placate the equestrian order for political reasons, and to avoid conviction for extortion, were reluctant to protect the provincials from the *publicani*, and would approve grossly exaggerated *pactiones.*" (Jones 1974: 164). This took place despite the existence of the *leges de repetundis*, which provided "for the recovery of the ill-gotten gains of Roman officials" (Lintott 1993: 44).

2.3.2 Policy reform

Taxation was an area of policy that Augustus recognised needed to be completely overhauled. As such it represents one of the few areas that were reformed for reasons other than military considerations. It also represents one of the few reforms that had a direct socio-economic impact on the provinces.

Augustus formulated and introduced an entirely new system of taxation that was applied uniformly across the entire empire. The system did away with the use of *publicani* in the collection of direct taxes and was far more rational and equitable than the republican system (Salmon 1968: 91). The new tax regimen was based on two main taxes: the *tributum soli* and the *tributum capitis* (Salmon 1968: 90). The *tributum soli* was based on a fixed percentage of the total value of a person’s holdings (usually one percent per year (Jones 1974: 164)), thus including land, houses, slaves and any other items of value. This tax applied to all except that on Italian land (Sinnigen & Boak 1977: 347). The *tributum capitis* was a poll tax that was collected from the age of either 12 or 14 through to the age of 65; depending on the area this may apply to either males or all. The poll tax was made viable by regular censuses every 14 years, everyone was counted regardless of age and taxed as they came of age or relieved of their obligation when they turned 65 (Jones 1974: 165).

The rights to collect customs tariffs were still sold to the *publicani*, but imperial overseers controlled them in order to ensure absolute compliance. Augustus also had the *publicani* collect the new taxes on Roman citizens, these included a one percent sales tax, a four percent special tax on the sale of slaves and a five percent inheritance tax that applied on amounts over 100 000 sesterces for Romans only (Jones 1974: 165 and Sinnigen & Boak 1977: 347). In this way Augustus was able to stop the negative impact of the *publicani* on the farmers and provinces in general (Jones 1974: 165).

In terms of the socio-economic impact, the new taxation system had a profound effect. No longer were peasant farmers at the mercy of the *publicani*. The result of this was that the provincial farmers were able to weather droughts and crop failures without losing their farms or becoming bankrupt through exorbitant credit lending rates (Jones 1974: 165). Thus the productive nature of the peasant farmer was maintained, as opposed to the less productive estates. The new system also made it far more difficult for governors and government officials to extort excessive amounts from these farmers; however, as Sinnigen & Boak (1977: 347) argue, the economic boom in agriculture and in the provinces in general took place despite continued corruption.

2.4 *The military, veterans and colonists*

2.4.1 Basic overview

During the republic, veterans were dependant on their generals for the allocation of land at retirement. There was thus no central policy with regards to the veterans and where they should be granted a plot of land. It was often based on the prestige of the generals who would have to ask the senate for an allocation for their soldiers (Lintott 1993: 92). Soldiers were also dependant on their generals for securing them an income. The result of this policy was that the troops were loyal to their general before anyone else; this may partly explain how Caesar and Sulla were able to turn their troops on their own country (Scullard 1979: 251).

The Roman armies were not permanently garrisoned and had acted as roaming armies of conquest constantly expanding the influence of Rome (Salmon 1968: 95). This situation was to be changed dramatically during the reign of Augustus.

With regard to the colonists, the Romans had experience of how other civilisations, such as the Phoenicians and the Greeks under Alexander, had used the formation of colonies in distant lands to cement their hold over that area through an active infusion of culture, trade and religion (Scullard 1979: 345). The local inhabitants would then become accustomed to the new colonists and soon became dependant on them through trade[10].

2.4.2 The effect of the *pax Romana*

The advent of peace caused a fundamental shift in the Roman military, as it would in any army. Augustus began by cutting the excessive size of the army from over sixty legions to twenty-eight legions, each legion comprising of 5500 infantry and 120 cavalry (Scullard

[10] See MacMullen 1968 for a fuller discussion of this issue.

1979: 252). The Roman troops then moved from being an offensive force to a defensive force. In order to defend their boundaries, the Roman legions were settled as permanent forces in each province with more troops stationed at the troublesome areas (Scullard 1979: 253). These areas being the provinces in the west, which were far less developed than the east. In order to supply the garrisons in the western provinces, Augustus built the interlinking road system[11] and the postal system (*cursus publicus)* that operated along the roads. This helped to fortify the garrisons and pacify the local population.

Of equal importance were the civilian camp-followers who now became sedentary and built up whole towns catering to the needs of the garrison and the individual troops who now received a regular income (Sinnigen & Boak 1977: 345). In the setting up of the fortifications and towns, large amounts of raw materials and cash flowed into the provinces in order to build the fortifications, roads, bridges and aqueducts (Scullard 1979: 254). All of this inflow represents the equivalent of direct foreign investment and capital expenditure that would have been of huge benefit to the peasant farmers and the local population in general (Scullard 1979: 254). Not only would farmers be able to sell their produce in the towns, but they would also have been able to trade over greater distances and exchange their money for various imported goods. At the same time the presence of the troops led to a reduction in banditry and piracy, thus reducing the risk involved in travelling with goods or money (Salmon 1968: 254).

The colonists formed part of Augustus' foreign policy and as such were not affected to any great extent by the *pax Romana*, although it would have made a move to the provinces far more attractive to any potential colonist. The point needs to be made, though, that the colonies would not have been set up under conditions other than regional peace, so in this

[11] Frank (1962: 366) describes a portion of the road system in the western provinces as follows, "…the long roads which Augustus mapped out, along the coast from Gaul to Gades, the northern one through Saragossa to Cantabria, and the inland one from Hispalis through Emerita to Salamanca, were primarily for military purposes, as their stations prove. They also served trade, and Romanized towns sprang up along their course, but that was not their chief purpose." There is also a direct comparison in the developmental status of the eastern provinces as Frank (1962: 374) describes the extant roads in Asia: "The central road from Smyrna running through Sardes tapped good shepherd country as well as the quarries of Phrygian marble at Synnada which Augustus used at Rome." It is important to note that the primary role of the roads in the eastern provinces were generally to serve trade.

respect they may be considered, to a limited extent, a result of the peace. Like the garrisons and camp-followers, the colonists would have represented a large potential market for farmers in the general vicinity (Frank 1962: 358 and MacMullen 1968: 337). The colonists in general also brought with them large amounts of money and, more importantly, knowledge with regards to farming methods (Frank 1962: 354 and MacMullen 1968: 338). That may, logically, have led a number of farmers to leave agriculture and focus on manufacturing or a trade in which they may have recognised a larger potential profit.

The peace also led to the emigration of Roman citizens into areas such as Africa and settling in places that were not colonies, such as Hippo, Neapolis and Carpis (Frank 1962: 358). These settlers were permitted by Augustus to form their own local government side by side with the native governments (Frank 1962: 358). As such, these settlers represent the true effect that the *pax Romana* was able to achieve throughout the provinces.

2.4.3 The effect of policy reforms

Augustus made a variety of policy reforms with regard to the military and their presence in the provinces. The emperor recognised the absurdity of the legions each being reliant on their generals for both their pay and their land grants on retirement. He therefore set a fixed rate at which each rank was paid per day[12], but of greater importance for this study was the way in which Augustus used the land disbursements as a key part of his foreign policy (Frank 1962: 354). The emperor realised that settling veterans in the boundary provinces would aid the garrisons in providing stability. This would have resulted in a significant reduction in the risk involved in both farming in the provinces and investing in them, in particular in the western provinces. Thus the settling of veterans and garrisons in the provinces provided stability and a base to which the farmers could sell produce to (Finley 1985: 107).

[12] Augustus set the basic salary at 225 *denarii* a year, which was considered good at the time, with occasional bonuses and a pension of land or money to the value of 3000 *denarii*; the standard tour of duty was also fixed at 20 years for legionaries (Scullard 1979: 252).

The policy reforms regarding the military and the veterans may be considered part of an overall military policy. Augustus then complemented this policy with another policy, which may be categorised as foreign policy: the settlement of colonies in places such as Uthina and Sicca in Africa, Cordova and Saragossa in Spain and Arles in Gaul (Frank 1962: 358). Colonies were the civilian aspect of Augustus' policy reforms and unlike the garrisons, they did not need to be paid and maintained out of government revenues. The effect on the local populations would have been very similar to that of the garrisons: the colonies provided a ready market for their produce and helped in Romanising them (Frank 1962: 365).

The overall effect of Augustus' policy reforms was profound and whilst there may be very little evidence to support it, there is a good possibility that the change would have occurred in two stages and both highly beneficial to economic growth. Firstly, the peasants would have realised that there was now a reasonably large market that needed their produce; this would probably have pushed a number of peasants that had been subsistence farmers to increase their crops in order to benefit from this expanded market. This transition would have had a profound effect on the socio-economic status of any peasants who undertook such an enterprise (Oertel 1934: 390). The second stage is more tenuous, but still very possible if not to the same extent of the first stage. This involves the movement away from peasants producing a variety of crops for their own needs (with the cereals making up the vast majority of the total crop) towards the specialisation in a single crop (such as vines and olives, which were both more profitable than cereals) with the understanding that other farmers would produce the other requisite crops. The farmers would then be able to trade their produce at the local market and be able to purchase any other goods that they required for their own consumption at the same market.

Whilst it is possible that such measures already existed in the tribal cities before Roman occupation[13], the arrival of the Romans, whether troops, veterans or colonists, would have dramatically increased the size of the markets and as such the possibilities would have

[13] Sánchez-Palencia et al (2006: 128-9) give a description of the basic household unit in pre-Roman Spain as a self-sufficient unit within a closed society that produced all its own needs and provided all its labour needs within the family. These units were peasant families who only relied on others for items or goods that required a degree of specialisation or the use of rare raw materials.

increased proportionally. Such specialisation would have increased the efficiency of the farmers (due to their being able to focus on one crop) as well as stimulate the market through a greater participation by all in that market. Once again, although these effects may have happened to differing extents across the provinces, there is no doubt that if these effects occurred they would have had a huge and lasting impact on the socio-economic position of all.

The other effect that the newly arrived Romans would have had was the dispossession of many peasant farmers with regard to their land. While there was the possibility of remaining as a tenant farmer on the land, there was a good chance that the former owners would find themselves having to adapt as non-farmers in the new towns and colonies. Farmers would have been forced to seek other occupations as traders or workers. However, there may be the equal chance that the farmers would not have recognised these opportunities and the local population would have had to absorb them as best they could. In these instances the dispossessed farmers would have been a drain on the economy.

The establishment of the new colonies and garrisons would have also had a detrimental impact on the amount of farmland since they would most likely have been built on farmland or extended the area taken by an extant town to include a portion of the farmland that surrounded the town. The total effect of this loss would have been negligible, however, as the proportion of this land in relation to the total amount in each area would have been miniscule.

2.5 *The Imperial* annona

2.5.1 Basic overview

The *annona* is the corn supply that was controlled by the senate during the time of the republic and which was later taken over by the emperor during the time of Augustus (Finley 1985: 40). The basis of the *annona* and the reason that this is one of the very few areas in which the Roman administration was directly involved in the economy, was due to the enormous strategic importance of a secure and reliable food supply, in particular for the city of Rome. The city of Rome was able to reach a population of over one million inhabitants during the time of Augustus. This was only possible due to the city not having to rely on the land surrounding it to supply the needs of the populace (Garnsey & Saller 1987: 62). The government control of the corn supply into Rome, from the provinces, meant that the city was able to continue growing well past the stage at which other cities grew unviable due to lack of food supply (Finley 1985: 128).

Initially the corn supply was focussed purely on Rome itself and its civilian population (Garnsey & Saller 1987: 83). The republic had realised the importance of securing a reliable source of grain for its inhabitants in order to ensure their survival during times of drought or crop failure (Mommsen 1996: 242). The Roman armies of the time, which were constantly moving, were reliant on their generals to secure food and supplies from the populations that they moved through. The effect on the rural areas that these armies moved through could be devastating if not carefully planned and co-ordinated. The farmers would have been in a very weak negotiating position with respect to the armed foreign military that was able to simply plunder anything they liked if they wished (Jones 1974: 161). The farmers faced the prospect of the loss of a large amount of produce under the best agreement.

2.5.2 The effect of peace and policy reforms

It has already been established that peace and Augustus' policy of garrisoned troops caused a major shift with regard to peasant farmers in the provinces. The advent of the permanently stationed troops led to Augustus extending the imperial corn supply to include the supply of corn to all of these garrisons (Garnsey & Saller 1987: 89).

Peace had thus created the conditions that allowed peasants to focus their attention on crop production. Concomitantly, policy reforms regarding the military and colonists had provided a ready market for surplus production of crops, but it was the imperial corn supply (paid for by the emperor himself) that ensured that even if the needs of the entire local population and troops had been met, surplus crops could be purchased for the supply of Rome itself (Garnsey & Saller 1987: 86). Fully one third of the entire cereal supply of Rome was produced by Egypt and transported by large cargo ships to Rome[14]. It was the *annona* that ensured the upkeep of the road system and which formed the backbone of the transport industry, being one of a very select group of goods that were exempt from tolls or tariffs during its transportation (Finley 1985: 159).

The imperial corn supply would have had little impact on the farmers of the eastern provinces since these markets were already well developed, as was agriculture in these areas (Garnsey & Saller 1987: 66). The largest impact was, once again, reserved for the more tribal and rural western provinces, which were suddenly introduced to peace and policy that might be considered as an early form of globalisation. Rome became increasingly dependant on the provinces for its supply of grain and this dependence would have pushed an increase in agricultural production that further fuelled the economic boom. The imperial corn supply and the *annona* should therefore be viewed as yet another part of

[14] It should be noted that seafaring was a precarious occupation at this time and as a result no shipping took place during winter due to the inclement weather in the Mediterranean. Thus the ships needed to provide enough crops to the imperial granaries to see that the supply of grain did not run out during every winter. The enormous difference in cost between land and water transport should also be noted: according to Diocletian's price edict it would be cheaper to transport a load of grain across the entire Mediterranean than it would to haul it 75 miles overland (Finley 1985: 126).

imperial policy that impacted positively on the socio-economic condition of the provinces and agricultural production.

2.6 *Land as an investment*

2.6.1 Basic overview

The Roman upper classes had a highly romanticised view of farming and the owning of land. Agriculture was viewed as the only noble occupation that the wealthy should be involved in and the stress-free, simple lifestyle was one written about by such people as Cicero and Pliny the Younger (Shelton 1998: 126). Large holdings allowed the wealthy to live a luxurious lifestyle in the city by supplying them with a constant income stream and must have conferred a large amount of prestige amongst the upper classes (Finley 1985: 98-103).

Since the wealthy viewed trade and manufacture with disdain, agricultural lands were seen as the only worthy investment that could be made other than lending money out on short-term interest bearing loans or simply hoarding their money in a strongbox. Interestingly, as several authors argue (Duncan-Jones 1982: 38, Finley 1985: 83 and Garnsey & Saller 1987: 63), the large estates were responsible for blocking technological development and innovation. They were, however, responsible for minor advances in crop yields through the use of different varieties of grain and crops as well employing the various farming techniques described by Cato, Varro and especially Columella (the mid first century agronomist) in their writings on farming. But, despite these small advances the overall situation is best described as “one of relative stagnation” (Garnsey & Saller 1987: 63).

The reason for this stagnation is that the owners were not as overly concerned with productivity as a small or subsistence farmer would be; the farms also tended to be worked by gangs of slaves that had no incentive to increase their productivity since the owners tended to be absent landlords and the fact that there was no benefit that would have accrued to the slaves if they did improve their productivity (Finley 1985: 102). For this same reason there was no drive for technological progress that might increase productivity (Garnsey & Saller 1987: 74).

Garnsey & Saller (1987: 74) best describe the reason for the seemingly illogical (in modern terms) attitudes of the upper classes to these factors: “Landowners had a strictly limited notion of profit and how to seek it, and a gravely defective method of calculating it (as illustrated by Columella’s attempt to demonstrate the profitability of viticulture[15]). In general, they were held in bondage by a value system that emphasized consumption rather than productive investment.”

These *latifundia* had, by the time of the establishment of the empire, come to dominate the agricultural landscape of the provinces and had increasingly taken over the land of the peasants (who were required to fight in the Roman armies, thus stopping them from farming their land and as a result often losing their meagre holdings) and the public lands (Finley 1985: 80).

2.6.2 The effect of peace

The newly founded provinces of the Roman Empire provided prime investment opportunities for wealthy Romans. The western provinces, being less developed than the eastern ones, might possibly have provided large tracts of land that would have been relatively cheap in comparison to other parts of the empire due to their prices initially being determined by a generally poorer local population[16]. The *pax Romana* also provided

[15] Columella does not include all the input and capital costs associated with production, such as labour costs (even if using slaves, the slaves need to be fed, clothed and housed), which leaves a grossly exaggerated profit and no recognition of numerous fundamental inputs.
[16] Finley (1985: 118-122) is quick to point out that there was no real-estate market as such (indeed there is no word that might describe a broker or real-estate agent in Latin or Greek) and that investment in land was not done on the grounds of profitability. In the same passage Finley

stability and decreased the risk involved in investing in a province. Thus, many wealthy Romans came, over time, to own vast tracts of land spread over the western provinces in particular, whilst basing themselves at the various cities, including primarily Rome, and living off the proceeds (Sinnigen & Boak 1977: 366).

The effect of the wealthy Romans investing in land in the provinces has been discussed in the section concerning land distribution. It should also be noted, however, that in at least some areas there would have been an increase in agricultural productivity on the estates, but that this was primarily due to the use of previously unworked land. In conclusion, the various policy reforms that affected the provinces would have had a positive impact on investment in the provinces. However, it was the advent of the *pax Romana* that served as the catalyst for the large-scale investment in agricultural holdings by the wealthy upper class Romans in those provinces.

2.7 *Crop yields*

2.7.1 Basic overview

There is very little evidence concerning crop yields during the period under investigation. The only ancient source that deals with this aspect of agriculture is Columella, who writes primarily about the agriculture in Italy, not the provinces. This in itself does not present a major obstacle since the Mediterranean area represents a single geographic area with similar environmental conditions all around. However, as Duncan-Jones (1982: 33) has

describes how estates were usually created and expanded through “windfalls” such as the purchase of derelict land due to war, bad luck or neglect; or, more commonly, through the confiscation of public land (*ager publicus*) and the extortion of peasants holdings through “usurious loans, illegal seizure or ’patronage’”. Thus Finley (1985: 122) remarks: “… it should be remembered, there are important social strata who knowingly accept a low rate of return on investment in farming because there are advantages ‘other than the direct monetary return… the feeling of personal security, the sporting rights, the social position, possibly some taxation advantage.’” In this instance Finley is quoting Clark and Haswell, (1970: 164), *The Economics of Subsistence Agriculture*.

found through his extensive quantitative studies regarding Roman trade, land and economy: Columella's figures regarding the yields of vines, cereals and olives are "palpably inaccurate".

The techniques employed by the farmers in Italy during the republic were based on those developed by the Greeks[17], just as much of Roman culture was modelled on Greek culture, which would only have fuelled the general feeling of inferiority that the Romans felt and the concomitant superiority of the Greeks towards the Romans (Sinnigen & Boak 1977: 367). Similar techniques and methods would likely have been found throughout the eastern provinces, which had been involved in organised agriculture for a far longer period than the Romans. This situation would have stood in stark contrast with the farming methods of the tribal areas of the western provinces. Whilst some of the western areas such as Spain and the lands of western Africa (along the Mediterranean coast) were positively affected by their interaction with the Carthaginians, much of western Europe was still very primitive in terms of agricultural techniques and thus crop yields (Sinnigen & Boak 1977: 366).

2.7.2 The effect of peace and policy reforms

As may be deduced from the basic overview, there was very little effect on crop yields in the eastern provinces with regards to the *pax Romana* and Augustus' policy reforms. The bulk of the change in crop yields therefore occurred in the western provinces. This change would have happened in two broad categories that may be directly linked to the effects of the peace and, separately, the policy reforms.

The first category includes the effect that the creation of the estates had on crop yields. The estates were created by the advent of peace and the opportunities that the western

[17] Current scholarship suggests that the peasantry did not use oxen for ploughing as their plots were either too small for an ox to be economically feasible or were prevented from doing so by the physical nature of their plots (there are numerous areas in Italy that have evidence of terraced plots on mountainsides). Thus, "[h]igh production per hectare was achieved at the expense of labour productivity and standard of living" through the use of intensive, free family labour (Jongman 2002: 37). Also see White (1956: 86).

provinces presented as investment destinations, as has been discussed in the section on land as investment. The emergence of these estates and their application of Roman farming methods would have resulted in a once-off increase in the crop yields of the applicable areas.

The second category pertains to the adoption of these new methods by the local populations. Whilst it is possible that the local farmers might have witnessed the new methods applied on the estates and copied them, it seems far more likely that they learnt about the methods and how to apply them from their interactions with the colonists and the settled camp-followers, which would have included farmers amongst them; both groups having come to these areas by virtue of Augustan policy. Again, the increase in the yield of crops amongst the local farmers would have been a single event.

The relative stagnation in crop yields after this point may be considered the result of the lack of incentive to increase productivity amongst the estates and the short-term leases that applied to tenant farmers on the estates and imperial and municipal lands (Finley 1985: 115). These short term leases (up to ten years) proved a disincentive to farmers wanting to produce anything other than those crops which could return a harvest from the beginning of the lease, thus avoiding the greater yields and profits that could be accrued through improved methods or different crops[18], which would have taken a number of years to take full effect or yield a crop.

[18] Erdkamp (1999: 558) notes the importance of planting a variety of crops in order to increase overall yields and take advantage of different crop cycles.

2.8 *Egypt: the special case*

2.8.1 Background

By the time of Augustus, the Egyptian civilisation had been in existence for over three millennia; as such it represented the most developed and richest province in the Roman Empire. The Nile valley was, most probably, the most fertile land in the entire Mediterranean area, producing possibly the highest yielding crops at the most consistent rate every year, due to the regular, seasonal flooding of the Nile. The Egyptians had also been diligent administrators having taken censuses and keeping records on property ownership (Finley 1985: 148). They were accustomed to a centralised administration, controlling a system of districts or nomes, which levied a tax on the population and the crops. Under the Ptolemies, all land belonged to the king and was a source of rent (Lintott 1993: 127). This administration was, however, vastly different from any other system in the Mediterranean area. In addition, the king held a monopoly over much of Egyptian agriculture (all crops had to be sold to the king at a set price; crop sizes and varieties were also dictated), manufacturing and trade[19] (Frank 1962: 384).

Egypt also held vast reserves of gold in the form of treasure and access to the gold mines of Kush and Numidia through long established trade routes. Transport within Egypt was far easier than in other provinces due to the presence of the Nile and the fact that all communities were within close proximity to the river. Egypt also had trade links to the spice route and the silk route, thus linking directly to India and indirectly (via India) to China. Frank gives an indication of the wealth of Egypt by describing how “when we survey the vast activities of the king, we are not surprised to discover that he had an annual revenue of over 15 000 talents – more than the entire revenue of the Roman Empire in Cicero’s day.” (Frank 1962: 386). Unfortunately, during the last century of Ptolemaic rule a

[19] Frank (1962: 385) estimates that the king may have made a 25% profit margin through his total control over the monopolies during the time of the Ptolemies.

succession of weak rulers had allowed this great nation to slide into a recession through widespread corruption and failure to maintain the canal systems.

The Egyptian people were also used to being ruled by a supreme king or queen whom they considered a demi-god. In addition, the capital Alexandria was founded by Alexander the Great, a man held in absolute reverence by both Caesar and Augustus, and built up by the Ptolemies with a distinct Greek influence, which would have been more familiar to the Romans. It was also located on the Mediterranean coastline and thus provided easy access. The combination of these factors meant that rule by a Roman Emperor would be a comfortable fit for both the Roman administrators, based at Alexandria, and the Egyptians. This great nation therefore presented itself as a cornucopia of both material and agricultural riches that Augustus, and Julius Caesar before him, realised was the key to the success of the empire and the emperor himself.

2.8.2 Incorporation into the Roman Empire

Due to the enormous importance of Egypt as a new province in the Roman Empire it was treated very differently to that of any other province. Augustus had divided the other provinces between control by the senate and imperial provinces, which were ostensibly the less stable provinces that required a more direct form of administration that reported directly to the emperor. The strategic importance of Egypt meant that even though the province was stable, the emperor would take a special and direct interest in the province.

Augustus appointed a *praefectus* with powers over the military based in Egypt as well as civil jurisdiction, thus effectively a governor. This was because the Romans effectively integrated the old system of administration, which was so different to that of Rome and those systems used in the other provinces. Another important reason was that Egypt was one of Augustus' allocated provinces and thus not under the jurisdiction of the senate (Lintott 1993: 127). The emperor also ensured that no senators or other governors were allowed to travel to Egypt without his express permission, effectively banning them from the province (Lintott 1993: 127).

As agriculture was of paramount importance to Rome, supplying one third of the total requirements of Rome, Augustus realised the importance of the canal systems that had silted up over the last century due to a lack of maintenance. He therefore immediately sent out the Roman troops based in Egypt to clean out the canals. This immediately increased the amount of arable land both along the outer banks of the Nile and, in particular, the margins of the Fayum oasis (Frank 1962: 397).

The other important measure that the emperor introduced was the abolition of the imperial monopoly and the fixed structures involved with it (Frank 1962: 388). The result of this was an increase in wage rates and the ability of the farmers to plant the crops that they preferred and in the quantities that they wanted (Sinnigen & Boak 1977: 367). This would have been of great benefit in both social and economic terms and is evident in excavations of villages on the edge of the Fayum, which reveal a marked increase in prosperity during the Augustan period (Frank 1962: 397).

Other important measures were the recognition of private property and the campaigns in the south that formed the final boundary of Egypt at the First Cataract (Salmon 1968: 106). Various campaigns also led to the establishment of better trade routes to Arabia and India via the Red Sea ports, hence dramatically increasing the volumes of trade between the various areas, although focussed on luxury goods and not agricultural produce (Frank 1962: 394 and Mommsen 1996: 106). It is equally important to note that at no time did Augustus attempt to settle colonists in Egypt. Soldiers who had fought at the battle of Actium had received parcels of land as part of their booty, but this was based predominantly on land that had belonged to Egyptian soldiers who had died in the battle (Frank 1962: 389). As such it cannot be viewed as a part of a policy of settling colonists in the region.

2.9 *Conclusion*

Agriculture was the dominant sector of the economy of the Roman Empire. Hence it played a significant role in the economic boom that followed the consolidation of the empire by Augustus. However, the factors that created this boom were rarely economic in focus. Certain measures would have had no effect, or even been applicable at all, if not for the *pax Romana*. Thus, in some instances it was the peace alone that had a beneficial effect on agriculture, whilst in others it was purely a consequence of the policy reforms.

Peace was the primary driver of the redistribution of land in the western provinces as wealthy Romans looked to invest in the new provinces. Whilst this would have led to an initial boost in crop yields as the new owners introduced new techniques and cultivars into the provinces, the estates still tended to be less productive than the peasant farmers. Productivity during this period and the following century can thus be described as stagnant due to a lack of technical innovation.

The new administration concerning the provinces played a large role in streamlining equitable tax regimens that did away with corrupt tax collectors and colluding bureaucrats, thus leading to better socio-economic conditions for the local populace. Policy reform that governed the military and colonists led to the establishment of infrastructure, markets, the *annona* and the influx of Roman capital and culture. All of this had a profound effect on agriculture and the socio-economic status of those living in the provinces. This effect was particularly acute in the previously under-developed western provinces versus the developed eastern regions.

Egypt represented a different set of rules entirely, with Augustus and his successors treating it as their personal domain. Realising the enormous importance of Egypt, Augustus abolished the imperial monopoly on agriculture and trade, cleared the irrigation canals and secured the southern boundary and trade routes to the east. All this was achieved in order to secure the supply of grain to Rome, but was administered within the previous Ptolemaic framework and tax system. All Egyptians felt the socio-economic benefit, however the prime beneficiaries were the poor.

The positive benefit of the inclusion of Egypt into the Roman Empire and the reign of Augustus on agriculture in the provinces continued to bear fruition over the following three hundred years and laid the foundations for a sustained period of economic growth that lasted for a century. While the primary beneficiaries of this period were the wealthy Roman upper classes, the peasants and farmers in the provinces would have been positively affected too, even if purely in the form of the security and stability that peace brought.

Chapter 3: Trade and Industry

3.1 Introduction

> "[The] diversity of [agricultural] development in different parts of Italy [and the Roman provinces], ranging from small farm to great ranch, finds a parallel in the industrial development. Farm-households in the early days tended to a 'house-economy' and self-sufficiency; as much food, clothing and equipment as possible would be home-produced. But as towns developed, their needs would be met by the growth of industry on a small scale: cobblers, smiths and others would use their special skills for their community and establish their small workroom-shops employing one or two free or servile hands, but not seeking to provide for more than their own immediate neighbourhood. But as men became more wealthy and demanded more luxuries, they created a wider market that was satisfied by the increase of commerce and of specialized lines of industrial production. Division of labour increased and something like a factory system emerged for the production of certain goods on a large scale and for wider distribution." (Scullard 1979: 335).

Trade and industry made up only a small percentage of the total Roman economy[20] as has been implied in the previous chapter. However, from an economic perspective, trade and industry represent the focal point in the understanding of economic development and growth. This sector also expresses the prospect of real class advancement as typified by Petronius' fictional freedman, Trimalchio.

The understanding of how trade and industry develop and the factors that might inhibit or encourage them thus holds many parallels in the modern world. Although they may have been on a far smaller and less sophisticated scale, all of the factors, such as infrastructure

[20] See Duncan-Jones 1982: 33.

and trade barriers, are directly applicable in a contemporary sense because they continue to be of importance in any modern economy.

However, once again, there is very little evidence from this period that concerns trade and industry (Frank 1962: 219). This may be due to several factors, amongst them the general disdain of the Roman upper-classes with regards to commerce other than agriculture and the fact that trade was utterly dominated by agriculture in the Roman economy (Oertel 1934: 383). The result of this is an even more tenuous study through induction and deduction of archaeological findings, predominantly those of Pompeii (Frank 1962: 245). The other major problem with this study is the fact that Augustus paid little attention to trade and industry, thus not focussing any reforms towards changing trade and industry within the new empire (Finley 1985: 204). The dominant factor that applied to the growth of trade and industry was therefore the *pax Romana*.

3.2 Industry versus Agriculture

3.2.1 Background

Agriculture was the dominant sector in the economy and combined with the attitude of the wealthy to it, it is not surprising to find that most investments were made in this sector[21]. This left trade and industry as the preserve of the middle and lower classes as well as the slaves, freedmen and foreigners. Most of the trade operations throughout the Roman Empire were characterised by a skilled owner who would manufacture an entire article by hand and then sell these wares directly to his community (Scullard 1979: 335 and Sinnigen & Boak 1977: 363). The owner might employ one or sometimes two freemen or slaves to help him, but would only produce as much as could be sold in his direct community (Scullard 1979: 335).

[21] Interestingly, the making of bricks was considered a part of agriculture and therefore was a “respectable source of wealth” (Scullard 1979: 337).

There were therefore no equivalents to the *latifundia* (the vast agricultural estates) with their gangs of slaves that at times numbered over ten thousand; there were very few large-scale factory systems as such and the division of labour was very rare and usually linked directly to particular industries (Scullard 1979: 335). These statements all apply to Rome and Italy, the prognosis in the provinces was at times even worse. Whilst the eastern provinces tended to have trade and industry[22] that fitted well with the Roman Empire, the western provinces tended to be far more self-sufficient and hence far less developed, thus creating far less trade and preventing a burgeoning industry.

3.2.2 The effect of the *pax Romana* and the advent of the Empire

As with agriculture, the effect of peace and incorporation within the Roman Empire was most evident in the eastern provinces as Augustus set about stabilising these regions through the building of permanent garrisons and colonies. Scullard (1979: 335) notes the increase of specialisation as people with skills such as cobblers and smiths began to take advantage of the burgeoning towns by setting up basic shops to cater for the community. As wealth tended to increase throughout the Roman Empire during the first century, so many of the inhabitants developed an increasing taste for luxury, which led to the trade in luxury items from other parts of the empire, or even outside[23] (Scullard 1979: 335, 340). As such they were able to take advantage of the roads and sea-routes that linked the Empire, many of which had been built by Augustus to both supply and communicate with his newly stationed garrisons.

The effect that peace had on the western provinces was muted in comparison with the eastern provinces due to their being of a far more developed nature before this time, as

[22] Egypt supplied papyrus, glass and textiles as well as many other goods; Syria exported wine, dried fruits and spices; whilst Asia Minor supplied wood, oil and wine; and Greece produced small amounts of oil and wine for export (Scullard 1979: 338).
[23] Trade with India and, indirectly, China opened up during the first century as new trade routes combined with established routes to feed an ever growing Roman appetite for exotic spices, silk and other goods (Scullard 1979: 340-1).

well as many of them being dominated by older civilisations such as the Phoenicians whose empires had been based on trade. Their growth might be seen more as being a part of the general period of sustained economic growth that occurred during the first century.

As has been stated in the introduction, involvement in trade and industry was generally looked down upon by the upper-classes. There is one exception to this rule and it becomes a major industry during the first century. The manufacture of fired clay bricks and tiles was viewed in Roman times to be a form of agriculture (Frank 1962:229). Both Scullard (1979: 337) and Frank (1962: 229) review the story of Domitius Afer who managed to consolidate the brick making industry in Rome just as the Great Fire of Rome occurred. It would seem that before this time most of the buildings in Rome had been made of tufa-blocks or travertine and the fire showed the superiority of fired clay bricks. Both writers comment on the fact that there were virtually no buildings erected after the fire that did not have either a majority or at least a few bricks stamped with the name of Domitius Afer[24].

Although Domitius Afer was based in Rome, it seems hard to imagine that a wealthy landowner in the provinces would not have taken advantage of good clay found on his property, in particular if there was a ready market in close proximity, such as a colony.

As with agriculture, the Roman government was also involved in the exploitation of resources wherever they were found, this was part of the "Empire's general policy of systematically exploiting any kind of resources" (Sánchez-Palencia 2006: 134). The vast Spanish gold mines at Las Médulas (the largest mine in the Roman Empire) give an indication of the fervour with which the Romans sought to fully exploit this material (Sánchez-Palencia 2006: 132-141). Roman military engineers, working with a large population of army and native personnel, created a system of high-pressure hydraulic jets, canals and sluices that extracted gold on an industrial scale, removing around 100 million cubic metres of gold-bearing alluvial deposits (Sánchez-Palencia 2006: 136-140).

[24] See Scullard (1979) and Frank (1962) for more detail.

3.3 *The effect of slavery on trade and industry*

3.3.1 Background

Slavery was a ubiquitous feature of all civilisations throughout the Mediterranean basin. Although its forms differed, the fact remains that slavery was viewed as a natural form of human submission metered out to, supposedly, inferior people and individuals (Wiedemann 1981: 1). Slaves, along with free and freedmen, formed the basis of the entire Roman economy and their influence over trade and industry was crucial for a number of very important reasons.

The Roman Republic witnessed a constant supply of slaves through new conquests, raids and piracy[25]. This resulted in a continuous stream of cheap labour. Slaves occupied the position of the current, minimum wage labourer (although many slaves worked beside wage earning freemen and freedmen fulfilling the same unskilled jobs). As on the *latifundia*, slaves provided the bulk of the workforce that were expected to do menial tasks that usually required very little skill and a lot of hard work.

In industry they would provide assistance to the small-scale craftsman or do the more specialised and unskilled jobs in small factories such as bakeries (Scullard 1979: 335-6). In trade they probably would have occupied the position of assistant to the trader, therefore doing menial tasks such as carrying goods and attracting customers. A skilled class of slaves was also apparent in sectors such as the pottery and metalwork industries, which were, by their nature, more amenable to factory production (Frank 1962: 221-4, 233-5). Under such conditions an enterprising craftsman might purchase a few skilled slaves and a number of unskilled slaves to assist the skilled slaves, thus increasing production without having to do all the skilled work himself.

[25] Julius Caesar is reported to have supplied Rome with over a million slaves during his campaigns in Gaul from 58 to 51 BC (Finley 1985: 72).

Another important type of slavery that is apparent in the Roman world is that of the slave as wealthy entrepreneur. Through their campaigns overseas, the Romans often captured highly educated and intelligent individuals who had held positions of great importance in their now conquered nation (Hopkins 1980: 6). These slaves were at times recognised by resourceful Romans with an enterprising bent and then bought and set up as entrepreneurs (Finley 1985: 76). These slaves thus represented an investment to their owner and the owner often left these slaves unsupervised under a profit sharing agreement. In time a significant number of these slaves, later manumitted, became extremely wealthy individuals epitomised by Petronius' fictional character, Trimalchio (Wiedemann 1971: 57).

Slavery thus formed a large part of the menial labour force and due to their continual supply, slaves constituted a very cheap form of labour that were often regarded as little more than talking implements or *instrumentum vocale* (Garnsey & Saller 1987: 116).

3.3.2 Slavery's effect on trade and industry in the provinces

Incorporation into the empire, together with the advent of the *pax Romana*, led to a dramatic expansion of trade and industry in the provinces and in particular the western provinces (Frank 1962: chapter XII). This expansion included the silver mines in Spain and the textile and, later, pottery industries in Gaul[26]. Whilst these industries were heavily reliant on cheap labour and were therefore primarily slave based, the effect of slavery on these industries serves as an interesting dichotomy.

The first part of this dichotomy was the opportunity that slavery represented as a quick solution in increasing industrial output through the purchasing of unskilled slaves to perform menial tasks. However, it also had a negative impact on industry in general. This was far more deleterious to the overall productive capacity of the Romans and the provinces.

[26] See Frank (1962) chapters XII-XIV.

This second, more sinister, side of the dichotomy has been outlined in the previous chapter on agriculture and concerns the impact of slavery in hindering technological innovation. This should not suggest that innovation with regards to industry did not take place at all[27], but rather that innovation with regards to labour saving and enhancing devices were less likely to be introduced or invented due to the habit of cheap slave labour (Scullard 1979: 336 and Frank 1962: 274). Finley[28] (1985: 147) goes so far as to suggest that there were "not many genuine innovations after the fourth or third century BC." An example is the fact that the Romans, whilst understanding the technology of the Archimedian screw and the waterwheel, never used either for the bailing out of water in mines, which was a major problem in the western and northern provinces[29] (Finley 1985: 147). Suetonius also relates the famous story of the mechanical device for transporting heavy columns cheaply, which Vespasian dismissed out of hand for the very reason that it would have led to less employment (*Vesp.* 18). Another story, repeated by numerous ancient writers, was that of the man who had invented unbreakable glass and demonstrated it to the emperor Tiberius; when asked if he had told anyone else about the invention, the inventor replied that he had not and Tiberius suddenly ordered that his head be removed "lest, Tiberius said, gold be reduced to the value of mud" (Finley 1985: 147).

3.3.3 The supply of slaves and their positions in trade and industry

The decline of slavery due to the *pax Romana* should, rationally, have led to the increased invention and adoption of labour saving devices. This does not seem to have taken place because the slave population did not decline precipitously, but rather slower than expected due to the active breeding of slaves (Finley 1985: 86). The shortfall in labour was most

[27] Technical machinery and labour-saving machinery were present in the production of pottery, silver and bronze ware, furniture, bricks, glassware and some table delicacies (Frank 1962: 273).
[28] Greene (2000: 29) makes a powerful argument against Finley's concept of the relative stagnation in technological innovation by using the latest archaeological evidence.
[29] Interestingly, Lintott (1993: 73) mentions that Diodorus described how miners at New Carthage in Spain did use "elaborate tunnels drained by Archimedian screws." The logical question that then demands explanation is why this technology did not spread to other mines in the western provinces? In either case a known technological innovation was not embraced by the whole Roman Empire.

likely taken up through the increase in freemen that had lost their lands and were thus offering themselves as paid labourers (see Finley 1895: 86-9).

The existence of slaves in trade is documented through the archaeological findings in Pompeii and Rome[30]. Their position in trade tends towards that of assistant to the shop owner as has been discussed in the background section. There were also the entrepreneurial slaves and skilled slaves, however these individuals were primarily active in Rome and some of the Italian cities. There is thus little evidence as to the influence of slaves in the provinces with regard to trade.

Once again, this topic falls within the realm of conjecture and deduction. It is very probable that slaves would have filled the positions of assistants in the workshops of the provinces. There is also the very real likelihood that skilled slaves were used in the textile and pottery industries and trade in Gaul. There is a far lower likelihood of the wealthy, entrepreneurial slave being given free reign in the provinces, where it is less easy for his owner to keep track of his investment.

There is therefore little physical evidence of the impact of slaves and slavery on trade and industry in the provinces. There is also little that may be stated with regards to how the situation regarding the slaves in the provinces might have changed during the reign of Augustus and the establishment of the *pax Romana*. The peace may have dried up the supply of slaves but, being a very small section of the economy, trade and industry would not have been affected to the same extent as agriculture. Slaves thus continued to form a large section of the menial labourers throughout the provinces and would probably have grown in proportion to the growth in trade and industry throughout the empire and in particular the western provinces.

[30] See Frank 1962, chapter XIV

3.4 *Trade barriers*

3.4.1 Introduction

In this instance, trade barriers refer to the economic understanding of the term, thus a trade barrier represents taxes that affect the flow of trade between different areas. Import and export taxes along with toll fees represent the modern versions of trade barriers. The civilisations that later formed the Roman Empire all used these mechanisms in order to fund the upkeep of trade routes as well as various outposts, in addition to being a source of revenue for the local administration (Jones 1974: 171). Although the costs of these tolls and taxes varied, the primary difference between those used in the time of the republic and those used today is that modern societies at times use these tariffs as a means to protect the local industries and ensure that foreign competition is severely hampered by them[31] (Jones 1974: 171).

The various types of transit dues that the Romans levied were the following: duties imposed at the frontiers of provinces or the empire, tolls at bridges or points in the road and duties at the gates of towns (Lintott 1993: 83). Under the *lex Antonia* the community of Termessus was granted the right to set its own regulations for *portoriis terrestribus maritumisque* (duties on land and sea) (Lintott 1993: 83). These duties were only applicable on goods for sale, thus not personal possessions (Lintott 1993: 83-4).

3.4.2 Trade barriers during the time of Augustus

It has already been stated that Augustus had a *laissez-faire* attitude towards the economy in general. The result of this was an unchanged continuance in using the systems that had

[31] The exception to this rule are the Ptolemaic Egyptians who levied rates of between 20 and 50 percent on foreign goods, this was initially supposed by historians to have been in order to protect the local monopolies, but, strangely, the highest rates applied to goods not produced in Egypt. There was therefore nothing to protect (Jones 1974: 171).

already been set up throughout the empire (Scullard 1979: 333). The only areas that were dramatically affected were those in the western provinces that would have a system of tolls and import and export taxes put in place where there had previously been few or none[32].

The primary change to the western provinces other than the new system of tariffs was the establishment of the roads that linked the armies of the empire to Rome. These roads would need to be maintained and it was the local populace that needed to do so (Jones 1974: 180). The maintenance of the roads was paid for by small toll charges known as *portoria* (Petit 1976: 64). At these low rates[33] the establishment of these new tolls did not represent a barrier to trade as the traders and various industries were then better able to move their goods between areas by making use of the roads (Jones 1974: 128). The tolls were therefore not prohibitive to the growth of trade and industry in the provinces (Jones 1974: 128).

Import tariffs were markedly higher than the tolls within the empire and our primary information comes from Egypt and Asia (Jones 1974: 171). Cities such as Palmyra, Carnuntum and Myos Hormos represent the focal points of trade with nations outside the Roman Empire (Scullard 1979: 339-342). Their tariffs for goods being imported into the empire were 25 percent. This is very reasonable when compared to modern tariffs[34], and as such do not represent a financial barrier to the flow of trade into the Roman empire (Jones 1974: 171).

[32] "In the Celtic world there was a tradition of customs-dues and tolls before the arrival of the Romans: they are attested on cross-Channel trade, in Aeduan territory and on the passes over the Alps" (Lintott 1993: 84).
[33] The standard rate was 2,5 percent (Lintott 1993: 85).
[34] For example, in South Africa an imported motor vehicle will be charged 80% import duty. Many other countries have similar measures in place in order to protect their own industries (the U.S.A. and its steel and agricultural industries for example).

3.5 *Infrastructure*

3.5.1 Background

Infrastructure in the form of ports and roads were the mechanisms through which the Romans controlled their areas of influence and the importance and relevance of these systems to agriculture have already been dealt with in the previous chapter. Much of that information is equally, if not even more, applicable to the fields of trade and industry.

Transportation of goods was hampered far more by the cost of transportation than it was by the various tariffs that were levied along their routes. Land transportation was particularly slow and expensive; this is partially blamed on the use of oxen, or donkeys, mules and even camels[35], to haul loads of goods (Finley 1985: 126). The Romans had not invented the horse collar at this point, which would have led to far quicker transportation as well as smaller quantities of feed in comparison to that needed for the hungry oxen (Finley 1985: 126). Transportation by sea was far cheaper, but restricted to seasons other than winter (Garnsey & Saller 1987: 52). These factors combine to explain why the major ancient cities of Europe, Asia Minor and North Africa were all positioned on the coasts or navigable rivers[36] (Finley 1985: 128).

The importance of infrastructure in any society and especially that of the Roman world is very simple: without a basic infrastructure, all products of an area are restricted by the need for those products in that immediate area (Finley 1985: 128). Thus, there is no real possibility of growth through the growth of specialised traders and industries that might be able to supply more distant areas (Finley 1985: 128). This is the situation that a number of the civilisations in the western provinces would have found themselves trapped in: an existence of basic subsistence.

[35] Salmon 1968: 253
[36] "The roll of nearly all the great centres - Athens, Syracuse, Cyrene, Rome, Alexandria, Antioch, Constantinople - can be called without going more than a few miles inland." (Finley 1985: 30).

3.5.2 The effect of infrastructure on trade and industry during the reign of Augustus

The expansion of infrastructure in order to service the newly established garrisons and colonies would have had a dramatic effect on trade and industry (Lintott 1993: 189). The roads linked the interior areas of the provinces to the markets throughout the empire. They also linked these regions to ports along the major rivers[37] and coasts. The *pax Romana* also led to the distribution of goods from the major cities into the interior regions that had previously been off limits due to incessant wars and banditry that all posed a significant business risk (Scullard 1979: 343). This new infrastructure also came at a cost: "state transport consisted of private resources, which were bound to the state by means of obligation and compulsion" (Kolb 2002: 67). Private individuals were thus expected, along with the local municipalities, to provide the wagons, animals and equipment as a service obligation (*munera)* for the state[38] (Kolb 2002: 68).

The prevalence of peace throughout the empire allowed the movement of people and goods with very few restrictions other than tariffs (Scullard 1979: 343). The provinces had become directly and permanently connected to Rome, Italy and each other (Lintott 1993: 189). An example of this interconnectedness and the prevalence of trade throughout the empire is the predominance of Arretine pottery (*terra sigillata*) throughout the empire in the first century. This was despite the fact that it was initially only produced at Arretium, due to the type of clay particular to that area (Scullard 1979: 336).

The effect of good infrastructure is further emphasised by what occurred later in the first and second century with regard to the trade in Arretine ware. The same type of clay was found in southern Gaul, and the same pottery producers as those in Arretium quickly seized the opportunity (Scullard 1979: 336). By making use of the Roman infrastructure the

[37] The interior of Gaul was primarily accessed via the Rhone and Germania via the Rhine. Rivers such as the Po allowed cheaper transport from Cisalpine Gaul, whilst the Nile was the trade artery for the whole of Egypt (Finley 1985: 32). White (1956: 86) cites the "excellent facilities for cheap transport provided by navigable rivers and canals" as being influential contributors to Gaul's boom in trade and industry.
[38] The municipalities were responsible for the long-term maintenance and functioning of this infrastructure, which was largely paid for by the tolls (Kolb 2002: 69).

operations in Gaul, at Lezoux and La Graufesenque, soon came to dominate the market for Arretine wares and the factories in Arretium soon closed (Scullard 1979: 336). As a result the archaeological finds of *terra sigillata* throughout the western regions of the empire came to be dominated by Gaulish ware within two generations of the operations opening (Finley 1985: 137).

Infrastructure thus formed part of Augustus' greater plan to set the bounds of the empire and to ensure peace throughout the empire (Salmon 1964: 254). It may, however, be argued that at least a few of the new roads were designed with the economy in mind: Oertel (1934: 387) refers to the roads linking the Spanish mining areas as having little military value. The prevalence of a good infrastructure would probably not have been sufficient to the expansion of trade and industry if peace had not existed (Lintott 1993:189). The finest examples of the combination of this infrastructure and peace were the western provinces, which would later come to dominate many important industries[39] within the Roman Empire. "This change illustrates how the extreme prosperity of Italy in the early years of the Empire was gradually overshadowed in some spheres by provincial competition." (Scullard 1979: 336). The western provinces tended to supply raw materials while the eastern provinces continued with trade and industry, in predominantly finished goods, as they had before the Romans (Scullard 1979: 337).

3.6 *The emergence of a single currency*

3.6.1 Introduction

The civilisations of the eastern provinces had already organised their own system of currencies before the time of the Romans, whilst many of the civilisations in the western

[39] The pottery from La Graufesenque is a prime example as well as the textiles and glass that also came from Gaul (Scullard 1979: 337). Other important industries were the mines in Hispania that produced gold, silver, tin and other minerals, the glass and textile industry in Syria and the state linen factories in Egypt (Scullard 1979: 337).

provinces were probably still using a system of barter before their incorporation into the empire. As such, trade both within and between these civilisations was perhaps complicated by the need to reach an agreement with regards to an exchange rate. This agreement was then further complicated in some eastern provinces by the choice of whether to base the value of the currency on the face value of the coins or the intrinsic value of the metals that constituted the coins[40]. The advent of a single currency would have thus negated the need to agree on exchange rates as well as opened up the western provinces to a more systematic trade[41].

> "[T]he Roman Republic did not impose a uniform silver currency throughout the empire. For example, in Asia the issue of silver tetradrachms bearing the design of the *cista mystica*, bow-case and coiled serpent, was maintained by the Romans after the end of the Attalid dynasty, which had invented them, until the beginning of the Principate. In Macedonia the coinage of the Antigonid kings, with a Macedonian shield on the obverse and wreath and club on the reverse, was adapted by the Romans, Artemis' head being substituted for that of the kings, while in Greece the new-style wide-flan Athenian tetradrachms became dominant to the extent that a law from Delphi made them the basis of financial calculations. In Spain *c.* 200-150 BC a new coinage emerged of the same weight as the *denarius* and bearing its identifying sign, but with local Celtic types (young male head/ horseman with spear) and Iberian legends. These coinages circulated in their own areas, while Roman *denarii*, though present in Spain, Sicily and the north of Italy, are rarely found in Greece before the late Republic" (Lintott 1993: 48).

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[40] Coins were usually made of alloys of different valuable metals, such as copper, zinc, gold and silver, but the ratios of the alloy were subject to change and the bulk of the coins became increasingly lead and tin, which were of far less value (Petit 1976: 89-90). Another option was to reduce the size and thus weights of the coins, which led to inflationary pressures (Petit 1976: 89). An example of the changing content of coins was that of Rome in 64 AD, during the reign of Nero, after the government realised that they were exporting most of their precious metal reserves to India through trade. The Indians responded by demanding the older more valuable coins instead of the new coins that held a far lower percentage of gold and silver (Scullard 1979: 341).

[41] "[T]here were in the late Republic facilities for transferring credit through bankers and tax companies, but it is not clear how far this was used systematically by Roman public authorities. Nor was there an elaborate credit system for private commerce such as the bills of exchange available in the Renaissance period" (Lintott 1993: 49).

3.6.2 A single currency

As much as the advent of a single currency to be used throughout the Roman Empire must have been beneficial to the conduct of trade[42], there must have been some concern in the eastern provinces in particular as to how to go about converting their currencies to that of Rome.

Once again the advent of a single currency would have had its most profound effect on the western provinces and in particular those societies that might have been barter economies before incorporation. “Monetary integration greatly facilitates market integration” (Jongman 2002: 38). Currency would have allowed the provincials to better trade with the new garrisons and colonies as well as opened their own societies up to more extensive trade, since they could now trade over longer distances without the need to carry their goods for the purposes of bartering.

The people of the empire were now also better able to make direct comparisons in prices of goods. Trade and industry in the provinces would likely have been positively influenced by the introduction of a single currency through a simpler economic engagement with the rest of the empire, also making use of the new infrastructure and the security provided by the *pax Romana.* The conversion of the empire to a single currency would probably not have made a large difference to trade and industry in the provinces when viewed in isolation, but this should best be viewed as a small measure within a larger framework that created the conditions conducive to sustained economic growth throughout the empire and specifically the provinces. As an additional factor the administration of the empire must have found it far easier levying taxes and tariffs based on a single currency, in particular when this information was collected from each province of the empire and studied in Rome.

[42] Salmon 1964: 253 and Sinnigen & Boak 1977: 361.

3.7 *Transportation*

3.7.1 Introduction

There was no fundamental change in methods or types of transportation between the time of the republic and that of the empire. Rome and the rest of the Mediterranean basin relied on two basic types of load carrying transport: the ox-cart for land transport and the boat or ship[43] for water transport. While there were various types of each, usually regarding size, they all fall into these two categories. As has already been mentioned in both this chapter and the previous chapter, land transport was slow and very expensive whereas transport by sea and river was cheaper and generally quicker, but sea transport stopped entirely during the stormy winter months (Garnsey & Saller 1987: 44, 52).

Thus both types were limited in scope. Land transport could have been quicker and cheaper had it not been for the failure of the Romans to design the horse collar before the waning of the empire (Garnsey & Saller 1987: 52). Sea transport might also have been more efficient if ships had been designed to be able to weather storms and thus able to sail throughout the year.

3.7.2 Transportation during the reign of Augustus

Despite the lack of innovation in transport, there must have been a marked difference in the extent and influence of transport in the new empire. This is fundamentally due to two factors: Augustus' policy of building roads and ports to service his troops as well as the advent of peace, which meant an extended freedom from attack by bandits and pirates (Sinnigen & Boak 1977: 361). Again, the most noticeable effect would have been in the provinces and in particular those situated in the west.

[43] "The Romans are known to have built ships of 250-450 tonnes from the first century BC " (Garnsey & Saller 1987: 49).

As the Roman economy grew, with the provinces providing more of the products that had previously been sourced in Italy, transportation would have grown by necessity in order to service this growth[44]. The growing importance of the provinces led many in these areas to grow wealthy and transportation provided the link to the desirable luxuries of cities such as Alexandria and Rome (Oertel 1934: 412).

Interestingly, despite the new wealth associated with trade and industry throughout the empire, it seems that transportation itself never became a service recognised as being particularly profitable on a large scale. Indeed trade in general was overwhelmingly conducted by the individual and small partnerships; there were very few joint stock companies (Salmon 1964: 257). It would seem that traders and industries would largely perform their own transportation with their own ships or wagons (Oertel 1934: 412). The logical, if tenuous, conclusion is that either a trader or a small factory would transport their goods themselves or they would sell their goods to a trader who would specialise in transporting the goods to a different market in order to resell them, much as the Phoenicians had done[45] (Duncan-Jones 1990: 35). The one major exception to this instance is the imperial government control over the guilds of ship owners both in Italy and the provinces in order to secure the grain supply for Rome and the transportation of supplies for the armies (Sinnigen & Boak 1977: 362). This presents one of only a very few instances in which government became directly involved in the field of trade, as they sought to secure the grain supplies through incentives[46] and paying above-market prices (Duncan-Jones 1990: 46).

[44] The growth in the trade of wine, and the mapping thereof throughout the Roman Empire, has become evident through the archaeological study of amphorae (Woolf 1992: 284-7)

[45] This seems to be the manner in which some of the Roman elite were involved in trade: Garnsey and Saller (1987: 49) point to the argument of Hopkins that if a 400 tonne ship has been calculated to cost from 250 to 400 thousand sesterces to build and then another 185 000 sesterces to load with wheat, then only the rich could have afforded to be involved and thus the trade must have involved the Roman elite. This, however, excluded senators who were forbidden to own ships (Duncan-Jones 1990: 46).

[46] "Claudius, for example, gave shipowners engaged in transporting state wheat to Rome exemption from the *lex Papia Poppaea* (an Augustan law that penalized the unmarried and childless), Roman citizenship and concessions normally awarded for parents of three children. Later emperors added and confirmed the valuable privilege of exemption from compulsory public services" (Garnsey & Saller 1987: 88).

Despite this seeming lapse in industry, safe transportation between the provinces and across the Mediterranean meant that industries could flourish in the provinces because they were now able to consistently access the markets of the Roman Empire via the infrastructure built up and consolidated by Augustus' policies (Sinnigen & Boak 1977: 361). Transportation thus formed a vital link in the growth of trade and industry in the provinces, but at all times it should be considered a result of the *pax Romana* and Augustus' policy reforms.

3.8 *Conclusion*

Whilst trade and industry in the provinces and indeed throughout the Roman Empire formed a small percentage of the overall economy, it was the one sphere of the market in which the lower classes could participate without the dominance of the upper classes who viewed these fields of endeavour with disdain. The emergence of the provinces with regard to industry should be seen as a direct result of the policy reforms of Augustus and the *pax Romana* that he established.

Although Augustus' position with respect to the economy was one of *laissez faire,* the infrastructure that he put in place provided the provincials with access to the markets of the empire, whilst the new garrisons and colonies provided new markets inside the provinces and particularly in the west. The lack of significant tariffs along the new roads and the suppression of banditry and piracy also helped to promote trade both to and from Rome. These factors also led some industries such as the Arretine pottery producers to establish satellite industries in favourable provincial sites.

The issue of a single currency might be best viewed as a facilitator, which would have eased the participation of provincials in trade conducted throughout the empire. It should be considered as a small part of the changes brought about by the policy reforms and the peace that led to conditions conducive to sustained economic growth in the Roman Empire. The case of transportation seems altogether different from that of currency since it deals with a segment of the economy that did not change in any primary sense, but rather in a secondary way. Thus, whilst the means of physical transportation did not change with the advent of the empire, the reforms of Augustus, which dealt with infrastructure, and the *pax Romana* greatly improved the ability of traders and industries to transport goods over longer distances and therefore connect the provinces to the great markets of the Roman Empire.

Of all the aspects of trade and industry that have been discussed, slavery seems to be the only one that may have had a negative impact on the growth of the Roman economy. Whilst it cannot be argued that slavery stalled the economic revolution of the first century, it may be stated that growth during this period might have been even more pronounced had the Romans been given an incentive to undertake technological innovation in the form of labour saving devices. It would seem that the Romans knew of the benefit of innovation such as the blowpipe in the glass industry, but seem to have actively shunned inventions that might save on labour costs, or increase productivity, such as the column transportation device and waterwheel. This phenomenon cannot be justified in the modern context, but is most reasonably described by the Roman attitude with regard to the number of slaves that they owned, especially amongst the Roman elite, although this statement is simply a deduction based on the available evidence.

Overall, the effect of the Augustan reforms was probably not as important as the advent of peace. However, both were the conscious decision of Augustus and although they were not aimed at effecting a sustained period of economic growth, their result was a dramatic improvement in conditions concerning trade and industry in the provinces. The direct result was an overall improvement in the socio-economic status of the provincial population.

Chapter 4: Lessons for Africa

4.1 Introduction

The purpose of the final section of this mini-thesis is to explore the potential of the causes of the Romans' sustained growth cycle over the first century to make a positive contribution to the current situation in Africa. It is recognised that the conditions and economic environments are vastly different between the Roman and contemporary times, but there is a fundamental similarity between the current state of development in sub-Saharan Africa and the western provinces of the Roman Empire before Augustus.

Both areas have experienced under-development in terms of infrastructure, subsistence agriculture, and access to major markets. Both also have a wealth of raw materials, although Africa possesses substantially more, and each is composed of a variety of different ethnic groups that have at times led to unease and violence. Africa is generally considered as a backwater of the global economy much as the western provinces were viewed, with regard to the eastern provinces, at the time of their inclusion into the Roman Empire.

At no point does this study take the view that Africa should be conquered and a beneficent dictator or emperor put in absolute power as happened with the western provinces. Instead this chapter means to explore the role of leaders and institutions as well as Augustan policy reforms that may have relevance in the contemporary African context. Whilst the majority of Augustus' reforms and leadership decisions were designed and implemented with a view to the subjugation of potentially hostile new regions and consolidation of the newly established borders, it is understood that a number of these reforms could equally be applied to African countries in their pursuit of sustainable economic growth.

Other areas of importance in any discussion of sustained African economic growth include subjects such as the role of national debt and international institutions such as the

International Monetary Fund and the World Bank (see Stiglitz 2002). First world agricultural subsidies that lead to an artificially low price for crops have also created a situation whereby third world farmers cannot sell their produce because the world price for their goods is lower than production costs (Meredith 2006: 684). These subsidies also lead to huge surplus crops in the wealthy countries that are then dumped at even lower prices, or as aid, in developing countries; thus wrecking the market for the poor, local farmers' crops (Meredith 2006: 684-5 and Bolton 2007: 196-200). As may be evinced from above, there are many problems facing Africa currently that have no direct parallel in the time of the Principate and thus fall outside the scope of this mini-thesis.

There are also many questions regarding politics and the political systems in use in Africa, whether they are democracies, dictatorships, absolute monarchies or even pseudo-democracies (one-party states where everyone is allowed to vote, but only for one candidate or multiparty elections where elections are blatantly rigged in the favour of the ruling party). This study does not seek to argue the merit of the various political systems even though it is understood that they have different effects on socio-economic issues. Each of these political systems has positive and negative elements that would constitute a separate chapter.

Power in Africa is inextricably linked with riches in the form of outright plunder or more subtle corruption, such as ensuring that all foreign investments have a local business partner; inevitably these partners are family members or close political confidants and friends of the countries leader (Guest 2004: 218-238 and Meredith 2006: 686-8). The possibility of such wealth in turn leads many to engage in civil war so as to take advantage of these riches themselves (Guest 2004: 14 and Meredith 2006: 686-7). This chapter does not seek to understand the reasons for war or how they might be stopped; its purpose is to understand the socio-economic advantages that accrue to all under conditions of peace, just as they did under the Principate. Further, the chapter seeks to show how enlightened policy reforms may lead to sustained economic growth that may bolster the advantages of a *pax Africana*.

4.2 Peace as the first imperative

4.2.1 Background

The continuous campaigns undertaken by successive Roman generals due to the Roman attitude towards military glory meant that Rome was in a constant state of war. Whilst this may have lead to an influx of resources in the form of loot, slaves and forced war reparations, this led to the growth of Rome at the expense of other civilisations (Petit 1976: 16). Both Rome and the surrounding civilisations would have thus been forced into setting aside much of their economic activity in order to engage in warfare. Many potentially productive individuals were recruited into military forces on all sides, thus ensuring that the economic capacity of a city or civilisation was markedly diminished while an even larger section of the economy was compelled into supplying the armed forces (see Petit 1976: 16 and Finley 1985: 90-1). This might of course also boost the economy or at least a section thereof.

The full effect of these continual wars was not fully felt by the inhabitants of Rome due to the resource influx, but it was felt in the Roman provinces and the other civilisations that were adversely affected (Scullard 1979: 178). The pre-Augustan Roman provinces including those in Italy suffered from a heavy depletion of peasant farmers that had Roman citizenship and thus the loss of smallholdings to the *latifundia* as discussed in chapter two (Scullard 1979: 178-9). This was because the Romans expected their male citizens to take up arms and join a legion when necessary, and since the generals were always looking to gain military glory there was a constant need for new recruits (Petit 1976: 17).

The lack of stability in the provincial regions would have constituted a major disincentive to invest in these areas as well as a block on any long-term projects, both state and individual (see chapter 2). Since most of the infrastructure built during the time of Augustus was built for the purposes of supplying the newly established garrisons, it follows that investing a large amount of time and resources into building a road for a constantly moving army makes little sense[47]. Similarly, an individual was unlikely to invest in intricate machinery or crops such as olives (which can only be harvested after ten to twelve years) if there is a chance that an invading army may destroy or expropriate them for their own use.

The net effect of these campaigns in the vulnerable western provinces was a depressed economy that was constantly hobbled by a lack of investment, a stable workforce and state resources (see Scullard 1979: 192). There are examples of productive industries in these areas, though they tend to be involved in the extraction and sale of raw materials such as the Spanish silver mines (Finley 1985: 83).

4.2.2 Peace in Africa

Much of contemporary Africa parallels the situation in the western provinces before their inclusion into the Roman Empire, though it might be argued that the current position of much of Africa is actually far worse. Peace in Africa remains an elusive dream for many countries such as Sudan, Somalia and the Democratic Republic of Congo and this has come at a huge socio-economic cost (Annan 2007). Oxfam has estimated the value of revenue lost through war in Africa over the last 15 years at over $300 billion and this figure increases by approximately $18 billion per year (Oxfam 2007).

As Scullard (1979: 333) and Salmon (1968: 253) discuss with reference to the Roman Empire, the single most important foundation for the sustained economic growth of the first century was the *pax Romana.* It was not the presence of peace and stability alone that created this period of growth, but without them it is doubtful whether the economy would have grown as it did (Scullard 1979: 333). Of importance in this inquiry is the role of peace as a facilitator and catalyst for economic growth. It is this function that is as relevant to modern Africa as it was to the Roman Empire.

[47] See Cary & Scullard 1975: 338

With a cessation in hostilities comes the opportunity to use the revenue, which had previously been used to fund the fighting, towards other national interests. These interests might include infrastructure in the form of a basic road system, potable water, and electricity and communication networks (Sachs, J. 2005: 233-4). Quite apart from the positive impact that such networks would have on the local population, stability leads to a greater investment of effort into setting up permanent systems that cause an increase in productivity and thus economic growth (Sachs, J. 2005: 226-243).

As with the Roman Empire, the majority of economic activity in Africa revolves around agriculture. The permanent systems thus envisaged are structures such as irrigation canals, the use of fertilizers and labour saving devices (Polak 2005: 64-7 and Sachs, J. 2005: 233). The planting of disease or drought resistant crops may not have an immediate impact on crop yields and would require an extra amount of effort to plant initially. However, the benefits will become clear during times of water scarcity or spreading crop diseases (Guest 2004: 194-9).

Ultimately, one of the biggest differences between a civilian population caught up in a war and one that is not is, time. Civilian populations will, generally, attempt to avoid violence and must therefore be ready to pack and leave at very short notice. The result is that civilians will usually limit their belongings to those that they are able to carry for long distances on their person. They will therefore rarely invest large amounts of time and effort in building permanent structures such as houses because of the ever-present possibility of having to abandon these structures at any moment. Time is thus usually spent attempting to cover the basic necessities such as collecting wood for fires and scavenging for food. The majority of the decisions made every day are therefore focussed on very short-term goals that are primarily focussed only on the needs for that day. The current poverty of so many African states can often be directly linked with war or civil unrest at some point in their recent past.

4.3 Leadership

4.3.1 Augustus

The role of the enlightened leader with regards to economic development is a pivotal point of discussion. It may be argued that Augustus fitted the role of the Leviathan discussed by Thomas Hobbes. Augustus was a beneficent dictator and was able to forge the most powerful empire of his time, but of even greater consideration was that the structures he put in place created such stability that the empire he helped to forge lasted centuries after his demise. It should be noted that few of the great empire builders created empires that lasted after their death, an example is Alexander the Great.

Cary and Scullard (1975: 347-8) give a comprehensive account of the reasons that Augustus was such an important leader and why he was so effective during his reign despite a number of unimpressive character traits.

> “The reign of Augustus was as much a turning-point of Roman history as Roman history was the pivot of ancient history in general. Yet the central figure in Roman history was one of its least heroic personages. Augustus had none of the immense vitality, the wide imagination and the quick decision that distinguished Caesar. Neither was he carried along by any strong sense of a religious mission … It is noteworthy that in the *Res Gestae* or summary of his achievements, which he caused to be inscribed on the portals of his Mausoleum, he nowhere represented himself as the chosen instrument of a divine purpose. He possessed little of that personal charm with which some of the world’s successful rulers have made up for their natural deficiencies.
>
> “If we seek to explain how such an unimpressive person could leave such a deep mark on history we must in the first place make a liberal allowance for the element of luck. In his first mad gamble for power Augustus enjoyed the support of Caesar’s old soldiers. During the Triumvirate Anthony played into

his hands, both as a colleague and as an enemy. At this period and in the early years of his reign Augustus was well served by his fighting man and first minister, Agrippa, and his confidential adviser, Maecenas. Finally, he had forty years of unopposed power, during which his political system had time to be well tested and amended in its details.

“But over and above his good fortune Augustus possessed two personal qualities which in a statesman outweigh all others. On the one hand he was remarkably candid to himself as to his own limitations. He was content to take one step at a time, and then pause until he could see his way more clearly. He did not keep in his own hands, but willingly delegated to others, tasks for which he had no skill or leisure. On the other, once he had decided that a given task was in his power, he pursued it with steadfast determination. He refused to be discouraged by his mistakes, but tried one key after the other until he had fitted the lock.

“Of the success of his work he received the most conclusive testimonials in his own lifetime … But the greatest testimonial to Augustus’ work lay in its durability. His constitution remained the framework of Roman government for three centuries, and the general lines of his foreign policy were followed by all but a few of his successors. No other Roman determined the future course of Roman history to a like degree.

“Augustus may be regarded as an epitome of the Roman people. He was not lavishly endowed, yet by making the most of his gifts, such as they were, he achieved a great and lasting work. This is also in brief the story of the Roman nation.” (Cary & Scullard 1975: 347-8)

4.3.2 Leadership in Africa

Research into the problems facing Africa and their causes is split between two broad camps: 'externalists' and 'internalists' (Ayittey 1999: 37). The externalists view the primary causes of Africa's predicament as being abuse by external (usually first-world) countries (and their associated international companies) and institutions such as the International Monetary Fund and the World Bank. Internalists view the problem as self-made and the fault of Africa's leaders since independence[48] (Ayittey 1999: 37-41). Neither side negates the effect that the other causes; they simply put more emphasis on the degree of impact of either the external or internal factors[49].

It is recognised that generalising on a topic such as African leadership is dangerous, but the alternative is to discuss the leaders of each of the 54 African countries[50]. The discussion will thus continue with an understanding that there are many common traits amongst African leaders but that these don't necessarily apply to all.

The African intellectual Chinua Achebe (1984: 1) wrote of his country that: "The trouble with Nigeria is simply and squarely a failure of leadership. There is nothing basically wrong with the Nigerian character. There is nothing with the Nigerian land or climate or water or air or anything else. The Nigerian problem is the unwillingness or inability of its leaders to rise to the responsibility, to the challenge of personal example which are the hallmarks of true leadership." Guest (2004: 12) suggests that by substituting "Africa" for "Nigeria" in the paragraph by Achebe, the true nature of Africa's problems will emerge.

> "Since independence, Africa's governments have failed their people. Few allow ordinary citizens the freedom to seek their own fortunes without official harassment. Few uphold the rule of law, enforce contracts or safeguard

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[48] Interestingly, contemporary authors that lay the blame for Africa's current economic situation on its leaders are often Africans themselves (see Ayittey 1999 *versus* Bolton 2007).
[49] See Ayittey 1999, Bolton 2007, Guest 2004 and Meredith 2006.
[50] Meredith (2006) provides a thorough examination of the key leaders in Africa and their impact over their nations, most proving disastrous. He also gives an account of why so many African countries "have suffered so many of the same misfortunes" (Meredith 2006: 17).

> property rights. Many are blatantly predatory, serving as the means by which a small elite extracts rents from everyone else. Predatory governments usually make their countries poorer, as in Nigeria and the Central African Republic… For most of the time since independence, the majority of African countries have been ruled by men with…authoritarian ideas. Kwame Nkrumah led the way, imposing a one-party state on Ghana, the first colony to win independence after the Second World War. Other African leaders followed suit, declaring that their own irremovable governments would henceforth control everything of importance. They nationalised everything from mines and factories to bicycle-repair shops, staffed them with ruling party cronies and then ran them into the ground.
>
> "For a while they were able to disguise the fact that they were not producing much by borrowing huge sums of money from foolish Western banks and governments. This created a temporary illusion of prosperity. Some of the borrowed cash was spent on free healthcare, education and loans to farmers, but much of the money was wasted on prestige projects: dams, conference halls, steel mills erected far from the nearest port and over budget, and so on. Little money was invested in such a way that it actually produced a return, so African governments eventually found themselves unable to service their loans, let alone repay them" (Guest 2004: 12-14).

The differences between the approach of the typical African leader and that of Augustus, with regard to the functioning of the economy, could not be starker. Augustus largely left the functioning of the economy to itself, where he did intervene it was in order to ensure the corn supply for the people of Rome or to radically reduce internal or external trade barriers (Scullard 1979: 333). These measures helped to grow the economy, not seek to control it (Scullard 1979: 333). Augustus also ensured that competent bureaucrats were put in charge of the various government departments and placed imperial overseers in the provinces that reported corrupt activity by the governors, thus ensuring far greater efficiency and decreased corruption (Richardson 1984: 60-6). Infrastructure was put in place, primarily for military considerations, but they also greatly increased the ability of ordinary people and goods to move freely within the empire (Sinnigen & Boak 1977: 310). The implementation of such basic reforms by African leaders would have an enormous, positive effect on the socio-economic outlook of the African continent.

Ultimately leadership in Africa needs to address the issue of responsibility and accountability (Annan 2007). It is only under these conditions that any reforms will have their full impact. Nelson Mandela, whilst addressing an Organisation of African Unity (OAU, now known as the African Union or AU) summit meeting in July 1994, said: "We must face the matter squarely that where there is something wrong in how we govern ourselves, it must be said that the fault is not in our stars but in ourselves that we are ill-governed … We know that we have it in ourselves, as Africans, to change all this. We must assert our will to do so." (Meredith 2006: 676).

4.4 Agriculture

Despite the fact that the geographic and climatic conditions of Africa and the Mediterranean basin are distinctly different, there are still lessons to be learnt with regards to the methods that the Romans employed that could have a positive impact on the productivity of agriculture in Africa. The Mediterranean basin is a temperate zone, whilst Africa is primarily a tropical zone[51]. Being situated in a tropical zone means that individuals and their livestock are constantly at risk of contracting a host of tropical diseases, and Africa is host to a number of the worst: malaria, yellow fever, ebola and many parasites (Guest 2004: 7-8). Conversely, Africa's geography and climate also confers it with very fertile soils as opposed to the poor soils of Greece for example.

[51] Guest (2004: 7) makes an interesting claim that it is Africa's geography as, primarily, tropical that is at least partially to blame for its current state, he states, "roughly 93 percent of the world's thirty richest nations live in temperate zones. The tropics tend to be poor: of the forty-two countries that the World Bank classified in 1999 as 'Heavily Indebted Poor Countries' (HIPCs), thirty-nine were either in the tropics or consisted largely of desert. The only three temperate HIPCs - Malawi, Zambia and Laos - were landlocked."

The lesson that the Romans leave Africa with is the importance of irrigation, such as that in Egypt. Africa does not have an abundance of large rivers such as the Nile; there are however large reserves held underground in the form of aquifers and underground lakes. A recent innovation has become available in the form of a basic and cheap water pump called a treadle pump, and this is able to pump underground water for crop irrigation (Polak 2005: 64-6). The average increase in crop yield with the use of this basic pump is more than twofold (Polak 2005: 65-6). Drip irrigation is another technique that is effective in water-arid areas, as much of Africa remains (Polak 2005:66-7) The presence of a basic infrastructure whereby farmers are able to access markets that were previously out of reach will further increase the possibility of profit as well as competition and thus greater productivity (see Annan 2007 and Delgado & Mellor 1984: 665).

Ultimately, the greatest effect on agriculture would be a modern version of Columella, Varo and other Roman writers' books on agriculture. This is already in evidence in the form of institutions that research agricultural methods and devices and then disseminate that information throughout their countries[52] (Delgado & Mellor 1984: 668-9 and Dommen 1986: 999). It is critically important that such information is disseminated to all and not simply the modern versions of the wealthy *latifundia,* so that all farmers throughout Africa constantly share that new information. Such a system would have the greatest chance of making a sustained, positive socio-economic impact and result in economic growth that reaches across all levels of agriculture (Annan 2007, Delgado & Mellor 1984 and Dommen 1986).

[52] An example of such an institution is the Agricultural Research Council based in South Africa

4.5 Industry

It is in the field of industry that the greatest hope for Africa lays, although agronomists (agricultural economists) will largely disagree (Livingstone 1968: 329). As with a number of the Roman provinces, the great wealth of Africa is found in its incredible mineral wealth. Africa holds “40 percent of the world’s potential hydroelectric power supply; the bulk of the world’s diamonds and chromium; 30 percent of the uranium in the non-communist world; 50 percent of the world’s gold; 90 percent of its cobalt; 50 percent of its phosphates; 40 percent of its platinum; 8 percent of its known petroleum reserves; 12 percent of its natural gas; 3 percent of its iron ore; and millions upon millions of acres of untilled farmland” (Lamb 1983: 20).

“In addition, Africa has 64 percent of the world’s manganese, 13 percent of its copper, and vast bauxite, nickel, and lead resources. It also accounts for 70 percent of cocoa, 60 percent of coffee, 50 percent of palm oil, and 20 percent of the total petroleum traded in the world market, excluding the United States and Russia” (Ayittey 1999: 6). Such figures stand in stark contrast to the economic reality prevalent in Africa. Yet it is these same abundant resources that hold the key to Africa’s growth.

The ancient site of La Graufesenque in Gaul provides an accurate example of the process that should be started within Africa. The Arretine potteries realised that the clay present at La Graufesenque was perfectly suited to the production of valuable arretine ware (Scullard 1979: 336). They also realised that it would be far easier to base the production of the finished pottery ware at the site of the clay rather than transport the raw material to their workshops in Arretium[53] (Scullard 1979: 336). The benefit of skilled and unskilled work thus accrued to the people of La Graufesenque and not those of Arretium (Finley 1985: 137).

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[53] Scarcity is the basis of many economies and is evident both in the example of La Graufesenque and its particular type of clay as well as in Africa with its many resources. The approach towards this scarcity is equally important, there are three approaches: the sharing response (where a scarce resource is shared), the competitive response (where a scarce resource is taken from others) and the growth response (Scarce resources are better utilised by all through increased productivity) (Hall 1964: 142). Rome tended to follow the path of the growth

The argument that should be applied to Africa is therefore one in which the raw materials that Africa provides should increasingly be worked into finished goods before they are exported. This would ensure that more skilled jobs are created and a far higher portion of the profits that accrue will remain in Africa. Large-scale ventures of this type would have a dramatic effect on the overall socio-economic status of the African population.

As with agriculture, the importance of good infrastructure cannot be underestimated. There is no point in setting up factories that may produce finished goods if they cannot be brought to foreign markets and still be competitively priced. Good road and railway systems are thus vital to Africa's future if it hopes to create sustained economic growth (Annan 2007). Trade barriers within Africa are cause for concern as well, since prohibitive customs duties and tolls could easily nullify the advantages of an extensive infrastructure[54] (see Guest 2004: 172-193). African states need to realise that it is in their own interests to minimise these trade barriers and ensure that goods can move freely within the continent; such an undertaking by the governments of Africa should lead to all African nations experiencing continued growth and thus economic benefit[55] (Cowan 2007). It is this freedom of movement within the Roman Empire that Scullard (1979: 343) describes as one of the foundations of the Augustan economic boom.

With regard to the types of goods that Africa should become involved in manufacturing, the Roman Empire provides another important lesson. Different areas of the empire were known for different products: Greece for its olive oil and art, Syria for its wine, dried fruits and spices, Egypt for its glass, papyrus and textiles, Asia Minor for its wood, oil and wine (Scullard 1979: 338). The lesson for Africa is therefore that different areas should seek to

response whilst Africa has tended towards the competitive response. This competitive response is best fitted to the economic theory of Mercantilism (see Brue 2000: 16-35).

[54] See Guest's (2004: 172-193) discussion of the perils of poor infrastructure and improvised tolls in Cameroon and elsewhere in Africa.

[55] There are various regional organisations that seek to promote regional economic development and poverty alleviation by allowing the free flow of goods (the Southern African Customs Union, SACU) or regional integration (Southern African Development Community, SADC) (Mohr et al 2002: 78). Stephan et al (2006: 261-318) gives an in-depth account of regional integration, the use of "Regional Economic Communities" and how they might function successfully in the modern world.

specialise in the manufacture of goods in which they have either an absolute or comparative advantage, either over other regions of Africa or, particularly, other foreign nations (Salvatore 2004: 33-7). The prize for such an undertaking is limited competition and thus greater profit margins, both of which lead to better social and economic environs for the people of Africa (Salvatore 2004: 33-7).

The final lessons that may be gleaned from the Roman Empire involve those areas in which the Romans proved fallible. These include their attitude towards technical innovation, the use of labour saving devices and their preconceptions with regard to upper-class involvement in industry (other than brick-making, which was considered a form of agriculture[56]) (Finley 1985: 102 and Garnsey & Saller 1987: 63). The active use of the latest techniques and equipment in African industry is, however, an area of concern (Guest 2004: 205-217). This does not apply generally as most large-scale industries will strive to remain competitive through the use of such advantages, but many of the smaller companies and individuals will continue to use those techniques and technologies with which they are comfortable and familiar with, thus missing out on the potential benefits of these innovations[57] (Guest 2004: 194-207). Africa should thus learn to better embrace new technology and innovations.

With such an abundance of mineral wealth, industry is probably the most important source of future growth. It also represents the sector of the African economy with the greatest room to grow substantially, if the right conditions are created[58]. These conditions include the existence of good infrastructure, the lowering of trade barriers and a willingness to engage in international co-operation in order to achieve sustained economic growth for all African countries[59] (Cowan 2007).

[56] For an interesting discussion of the brick-making industry see Darvill & McWhirr (1984).
[57] Guest (2004: 210) gives an account of the effect of ignoring technological development in North Korea.
[58] For a controversial view of development in general see Sachs, W. (2005).
[59] The New Partnership for African Development (NEPAD) was launched in 2001 with the express purpose of channelling $64 billion per year, through Western private sector investment, into the 15 partner states over the following fifteen years. The hope is that this will lead to an overall annual growth rate of seven percent, which would lead to a halving of poverty by 2015. The funds would be made up through aid, investment, trade, debt-relief measures and the dismantling of trade barriers targeted towards African goods (Meredith 2006: 679).

4.6 The market

In this context the concept of 'the market' refers to the global market for goods and services in much the same way as Rome may have been considered the centre of trade within the Roman Empire[60]. In the same way that the Romans during the time of Augustus needed to be able to access a market locally in order to sell their crops or goods, so access to the contemporary, global market would have a significant effect on the Africans involved in that market (Bolton 2007: 175-236). In the simplest terms, access to this global market would radically increase the seller's exposure, thus making it easier to find buyers as well as sell goods for which there may not be a market locally (see Bolton 2007: 167-236).

Access to the global market entails the use of infrastructure both for transportation of the goods as well as communication infrastructure in order to keep in contact with wholesale traders and buyers. Shortcomings and the failure to maintain either area will lead to a stifling of the ability to conduct trade, much as the neglect of the irrigation canals in the Fayum oasis by the later Ptolemies caused a loss of fertile land and hence crop yields (Francis 1914: 130-1). Stable access to the global market thus represents a huge opportunity for sustained economic growth and social benefit that would cover increasingly large sectors of African society including those in rural locations (Bolton 2007: 283). This stability also requires an expansionary legislative framework in the form of minimised trade barriers and a simple taxation system that does not present a burden to traders much as Augustus instituted in his new empire.

[60] Finley (1985) often states that there was no market economy in the Roman Empire, this conception has only recently begun to be questioned (once again the ever present ghost of Moses Finley meant that few would disagree with the great man) by economists such as Peter Temin and Greg Woolf. For a full discussion of why the Roman Empire was indeed a market economy see Temin (2001) and Woolf (1992).

4.7 Legislative reforms

Whilst the establishment of the Roman road and transportation system may not fall into the realm of legislative reforms, it was these reforms that ensured the accessibility of this incredible transportation system to the average Roman businessman or trader. Augustus' reforms with regard to legislation included the streamlining of the taxation system and the creation of non-prohibitive tolls and trade barriers (see Jones 1974, Salmon 1968 and Sinnigen & Boak 1977). Augustus also ensured that his government interfered as little as possible in the Roman economy, with the major exception being his securing of the imperial *annona* and the military supply lines (Finley 1985: 159). He thus exhibited a marked difference to numerous later African leaders who attempted to take control over their entire economies (see page 9).

By extending the bureaucracy, Augustus was able to ensure that at least some of the corruption that had taken place during the republic was quashed (Sinnigen & Boak 1977: 347). Removing the *publicani* and their tax farming activities, which amounted to little more than extortion of the poor, and replacing them with a transparent system of officials who collected a set rate achieved this (Sinnigen & Boak 1977: 347). The other important check on corruption was the creation of the imperial overseer, positioned as a direct check on the activities of the governor (Sinnigen & Boak 1977: 346). These measures did not eradicate corruption and it is possible that collusion between these parties probably took place, but the most important lesson from this set of reforms is that corruption cannot be tolerated lest Africa becomes a parasitic vampire state[61].

Augustus may have streamlined the taxation system within his empire, but it was an inherently unfair system, by modern standards, which left the poor in the provinces with the heaviest burden (Finley 1985: 91). Those with Roman citizenship and all Italians were given immunity from taxation and thus the wealthiest sector of the Roman Empire was

[61] Meredith (2006: 687) quotes an African Union report from 2002 that estimated the total cost of corruption in Africa as being $148 billion per year, this equates to a quarter of Africa's entire gross domestic product (GDP).

effectively subsidised by the poor (Finley 1985: 91). Modern economics suggests a system of stratified taxation where all pay tax, but the rate of taxation increases with an increase in income (Steenekamp 2004: 160). Thus, those who are able to afford it pay the major tax burden and those that cannot are taxed at much lower rates, or even exempted entirely (Steenekamp 2004: 160). Such systems are in place in most countries in Africa already, however their efficacy in terms of collection is often doubtful (Deloitte 2006).

Another tax that Augustus kept in place from some conquered nations, such as Egypt, was a poll tax at a set rate for every person in that country (Lintott 1993: 127). Instituting such a tax in Africa, or any country[62], traditionally creates a lot of anger towards any government attempting to implement it, quite apart from it being very difficult to implement without a very efficient bureaucracy and regular census records (Steenekamp 2004: 138 and Salmon 1968: 92). In all likelihood the reason that the Egyptians accepted the continued payment of this tax was that it had been levied from at least Ptolemaic times and as such represented the norm (Jones 1974: 162). This may also explain why such a tax was not implemented across the empire.

Of equal importance in any economy that collects tax is a system that is able to account for all the people of that economy. Thus Augustus took regular censuses of his empire in order to account for all potential taxpayers (Jones 1974: 165). The Roman Empire also kept records on land ownership (Salmon 1968: 92). Few African countries have a central database recording land ownership that may give policymakers an accurate overview of their nation from which they might be able to make targeted policy decisions (Guest 2004: 75-6).

There are thus many areas of Augustus' policy reforms that have application in modern Africa whether they are of direct application, or alternatively those that could be improved upon or even avoided through the application of two thousand years of hindsight and basic

[62] "The perceived unfairness of the poll tax introduced in 1990 by Margaret Thatcher is widely regarded as one of the factors that led to her downfall later that year…A £1 poll tax was introduced in Natal in 1905 and is considered to be one of the immediate causes of the 1906 Bambatha Rebellion" (Steenekamp 2004: 138). Thus the perceived unfairness of the poll tax is often considered too high risk for policy makers (Steenekamp 2004: 138).

economic theory. The central tenet of Augustus' reforms is one of minimising the amount of interference that the government creates in the economy and the functioning thereof[63]. Policies should be introduced in order to better facilitate the growth of the economy and if Africa were to embrace these policy ideals then they would certainly contribute to the sustained accrual of socio-economic benefit for all Africans.

4.8 Conclusion

Differences in geography, politics and time mean that many of the problems currently facing Africa have no parallel in the Roman Empire. Issues such as sovereign debt, education, healthcare, the internet, inflation, bilateral and multilateral trade agreements, dumping, import and export quotas, trade subsidies, customs unions, cartels, infant-industry protection and voluntary export restraints are all relatively recent mechanisms that now have a huge effect on all African nations[64]. For all these differences there are a number of significant similarities that Augustus addressed directly and which could be used as a template for action in Africa, with the goal of sustained economic growth and a general improvement in social welfare for all.

At all times the most important step remains the establishment of peace throughout Africa, how this can be achieved should not be found in Augustus' military solution. The sheer futility of under equipped forces clashing with rebel groups is apparent throughout Africa. African states, with a few possible exceptions[65], do not have the capacity to maintain peace through military might alone. How peace is brought about is thus not the issue so much as the fact that it is imperative that it is established and diligently maintained. Only in a state of stability and security will reforms and the building of infrastructure have their full effect.

[63] See chapter 2 and 3
[64] See Salvatore chapter 8 and 9 for a comprehensive analysis of the effect of trade barriers on an economy and in particular their effect on poor countries where the terms of trade are often forced on them by a dominant nation.
[65] South Africa, Libya and Egypt stand out as possible exceptions.

Infrastructure is the next foundation stone that Africa's growth should be based on. Roads, rails and ports have the ability to physically link the farmers, manufacturers and traders to the global market much as the Roman road system did within the empire (see Guest 2004: 172-193). Next should come the legislative reforms that seek to simplify the conduct of trade and decrease government involvement in the running of the economy where it can. Such reforms will also lead to the creation of a far safer investment environment into which it is hoped an increasing number of foreign companies could take advantage of (Ayittey 1999: 326). As can be seen in the Roman western provinces, the inflow of foreign capital will inevitably lead to growth in the surrounding market and thus makes a positive socio-economic impact on the local population (Meredith 2006: 683).

The building of a respected and capable bureaucracy will add further confidence to any population as it would tend to decrease the levels of corruption and inefficiency, if not total incompetence, that plague many African states[66](Meredith 2006: 688). Augustus achieved this by creating his own bureaucracy that was accountable directly to him, this is close to the current system in many countries, but the difference is that the people in these positions are often cronies with little incentive to do their jobs (Meredith 2006: 687). Leaders of Africa should learn to hold all civil servants to account as Augustus did.

Ultimately, it is up to the leaders of Africa to decide to take the necessary steps in order to create the conditions for sustained economic growth and many have already begun the process through mechanisms such as the New Partnership for African Development (NEPAD) and the African Union. Unfortunately numerous leaders have paid no more than lip service to these institutions and simply continue as they have before. Augustus and the Roman Empire provide many lessons regarding the maintenance of sustained economic growth and the, often painful, process that is necessary in order to establish it. It is up to Africa to learn from these lessons and apply them with the hope of a happier, more prosperous life for all.

[66] Ayittey (1999: 76) is also quick to point out the fundamental importance of an independent and impartial judiciary that is recognised by the entire population for being impartial.

Chapter 5: Conclusion

The Roman economy during the time of the Principate was a distinct departure from the economy of the previous republic and the various provinces and independent nations that later made up the empire. While it may be true that the vast majority of Augustus' policies were put in place in order to facilitate the maintenance of peace, their unintended consequence was to create a century of economic growth throughout the empire and in particular the provinces in the west.

At all times it should be considered the condition of peace that formed the foundation for Augustus' reforms and the resulting economic boom, though this is a misleading statement since the *pax Romana* was a conscious choice made and then maintained rigorously by the *Princeps*. Peace was thus not simply a condition that the Romans were merely fortunate to encounter and herein lies the lesson for Africa and its leaders.

Once peace had been established Augustus went about reforming the bureaucracy and the instruments of state so as to ensure a greater degree of accountability and efficiency. This was of particular importance for the provinces, which had been subjected to corrupt governors and malevolent tax farmers. Amongst others, the reforms made the governors directly accountable to the emperor (via an imperial overseer) and the tax system did away with the use of tax farmers for collecting anything other than standardised toll fees. The tax system was also streamlined into a more transparent and equitable system (even though the burden was placed firmly on the poor in comparison with modern, progressive taxation systems).

With regard to the actual running of the economy, Augustus pursued a system of *laissez-faire*. The one major exception to this rule was the corn supply, which provided Rome with the *annona* and the various garrisons with a regular supply of grain. By allowing the free flow of trade within the empire, through the abolition of prohibitive internal trade barriers, Augustus created the conditions for all occupants of his new empire to become involved in the Roman economy. This engagement in the economy was greatly facilitated by the new system of roads that linked the provinces and interior areas with the rest of the empire either directly or via ports and harbours on the coastline and along the numerous navigable rivers. The importance of these river highways in the western provinces, with reference to their economic growth, should not be discounted. Few of the eastern Roman provinces other than Egypt had navigable rivers that allowed the easy flow of goods from their interior regions, hence the preponderance of coastal cities in these provinces in comparison with the cities within the western provinces. It was the cost benefit of transporting wares via these rivers that greatly contributed to the flourishing of trade and industry in the central regions of the western provinces.

Of equal importance to the growth of the economy in the western provinces was the influx of both public and private capital. Public capital arrived in all provinces in the form of the resources needed to pay for the building of the road system and the fortified garrisons. This inflow would have created a large amount of employment in order to build and a smaller amount in order to maintain them, though much would have been done by the military itself. A large amount of capital also flowed into the provinces in the form of wages for the soldiers and money used to purchase goods that by their nature were less amenable to transportation over long distances, such as food. In this way the corn supply of Augustus would have provided a ready market for local farmers since grain was most often sourced from the garrison's surrounding areas. This is because it was far cheaper (land transportation being extremely expensive and far more suited to the transportation of high value goods) to supply the garrisons with the money needed to buy the grain than to supply the grain itself. Thus flows of state capital contributed greatly to the growth of the Roman provinces and those in the west in particular due to their far less developed status by providing a market for crops and goods.

Public capital flows took the form of the colonists and the *latifundia*. The colonists and landowners not only brought in capital in the form of money, which often led to the creation of entirely new markets for the local population to sell to, but also intellectual capital in the form of methods and techniques that could be applied to both the agricultural sector and the industrial sector. Whilst purely the new colonists may have initially used these new methods, it was a matter of time before they would have diffused into the local populous and thus led to an increased productivity across the province. The second effect that the arrival of the new colonists would have caused was an increased wealth amongst a number of the locals that in turn established a taste for luxury that was evinced by the colonists. An increased level of import trade sated these luxurious cravings and the traders soon established trade routes between various areas to which they sold wares from each region using the new road infrastructure, thus creating an export market within each region as well. The provinces soon became an integral part of the whole Roman Empire and economy.

Agriculture and trade and industry formed distinctly different sectors of the overall Roman economy and were treated very differently as well. The upper-classes viewed agriculture as the only truly virtuous vocation and linked that view with a delusion of the easy, simple farming life. This resulted in a seemingly constant rise in the number of vast agricultural estates (the *latifundia*) and the use of techniques described by Varro and Columella, which in turn led to the diffusion of these methods in the provinces as the *latifundia* spread further into the new territories as described above.

There is a slow but marked shift in the operation of the *latifundia* at the beginning of the reign of Augustus. The owners of the estates increasingly turned the cultivation of crops over to local peasant farmers with rent being paid in the form of a proportion of the crop. This is in contrast to the owners working their lands directly, with the use of great numbers of slaves. Ironically, it is the use of slaves that contributed to the lack of interest in technological innovation and labour-saving devices, which stands out as one of the most significant failings of the Roman Empire.

Unfortunately this attitude towards technological advancement pervades the trade and industry sector as well. This suggests that this prohibitive viewpoint is indicative of the general Roman population and not just the upper-classes, since it was the upper-classes that deemed involvement in trade and industry as demeaning (with the exception of the brick-making industry). This sector of the economy was primarily made up of individual craft and tradesmen, perhaps with the assistance of a couple of slaves or freemen. With some notable exceptions (such as the Arretine pottery industry) industry did not employ a factory system and thus never realised the benefits of a division of labour and economies of scale. Despite this, there was a flourishing of both trade and industry in the provinces as wealth and infrastructure increasingly allowed people to engage in occupations other than subsistence farming. Regions also increasingly specialised in certain products for which there was a market either in Rome or the rest of the empire and in which they held a competitive or comparative advantage.

Ultimately, this study points to several basic factors that are necessary to achieve sustained economic growth in any under-developed economy. It is these points coupled with those that proved prohibitive that lead to a set of basic lessons for the economic growth of Africa. Foremost of these lessons is the role of leadership. Although peace may seem the first imperative to any plan for economic growth, Africa has on many occasions proven that without good leadership peace is either a pipedream or cannot (or, sadly, will not) be maintained. Leaders must realise the importance of peace over the importance of their own power or wealth. The next lesson is the beneficial role of the competent and benevolent leader to the growth of a nation.

In this instance, competency includes a *laissez-faire* policy with regards to the economy. It also includes those basic systems that aid economic growth such as an efficient bureaucracy, effective taxation and good infrastructure. Other measures that will further enhance this growth are the reduction of tolls and tariff barriers and the active use of technology and labour-saving devices. The adoption of these lessons will not only lead to greater productivity of the local population, but also encourage foreign companies to invest in the economy thus increasing the potential economic gain and providing added stability to the cycle of economic growth.

There are many other exogenous problems facing Africa, however the Roman economy has few parallels for these factors. It is nonetheless believed that if Africa was to implement these Roman and, particularly, Augustan measures that the continent could only benefit from it, and most likely would flourish as a direct result.

This study has also opened up the possibility of continued research in various areas of concern to this study. Further research could revolve around the role of Roman leadership in the economy of the empire and economic analyses of specific western provinces or particular industries. In addition, there are the potential topics that affected the economy of the Roman Empire, and continue to do so in Africa today, such as disease, climatic conditions, technology and bureaucracy. Even more pertinent might be studies into the effect of land reform on productivity, the emphasis of employment over technology and even the effect of veterans' land packages.

Bibliography

Achebe, C. 1985. *The Trouble with Nigeria*. Enugu, Nigeria: Fourth Dimension Publishing

"Africa's missing billions: International arms flows and the cost of conflict." Briefing Papers, 11 Oct. 2007. Oxfam International. 12 Nov. 2007. http://www.oxfam.org/en/policy/briefing papers/bp107_africas_missing_millions

Alföldy, G. 1985. *The Social History of Rome.* New Jersey: Barnes and Noble Books

Annan, Kofi 2007. Africa's wave of progress. *Mail & Guardian,* 27 July to 2 August 2007: 28.

Ayittey, G. B. N. 1999. *Africa in Chaos*. New York: St. Martin's Griffin

Bang, P. F. 2007. Trade and Empire-In search of organizing concepts for the Roman economy. *Past and Present,* no. 195: 3-54.

Bolton, G. 2007: *Poor Story: An insider uncovers how globalisation and good intentions have failed the world's poor*. Great Britain: Ebury Press

Brue, S. L. 2000. *The Evolution of Economic Thought.* Crawfordsville, USA: R. R. Donnelley and Sons Company

Cary, M. & Scullard, H. H. 1975. *A History of Rome.* London: Palgrave

Cowan, David 2007. Top US bank punts sub-Saharan outlook. *Sunday Times: Business Times,* 30 Sep. 2007: 16.

Darvill, T. & McWhirr, A. 1984. Brick and Tile Production in Roman Britain: Models of Economic Organisation. *World Archaeology,* 15(3): 239-261.

Delgado, C. L. & Mellor, J. W. 1984. A Structural View of Policy Issues in African Agricultural Development. *American Journal of Agricultural Economics*, 66(5): 665-670.

Deloitte Guide to Key Fiscal Information: Southern Africa 2006/2007. 2006. Cape Town: Deloitte and Touche.

Dommen, A. J. 1986. Increasing Food Production in Sub-Saharan Africa: Comment. *American Journal of Agricultural Economics*, 68(4): 998-999.

Duncan-Jones, R. 1982. *The Economy of the Roman Empire: Quantitative Studies.* Great Britain: Cambridge University Press

Duncan-Jones, R. 1990. *Structure and Scale in the Roman Economy.* Cambridge: Cambridge University Press

Erdkamp, P. 1999. Agriculture, Underemployment, and the Cost of Rural Labour in the Roman World. *The Classical Quarterly*, New Series 49(2): 556-572.

Finley, M. I. 1985. *The Ancient Economy.* Reading: Cox and Wyman Ltd.

Francis, R. 1914. *Augustus: His Life And His Work.* London: George G. Harrap and Company

Frank, T. 1962. *An Economic History of Rome.* New York: Cooper Square Publishers Inc.

Garnsey, P. & Saller, R. 1987. *The Roman Empire: Economy, Society and Culture.* California: University of California Press

Greene, K. 2000. Technological Innovation and Economic Progress in the Ancient World: M. I. Finley Re-considered. *The Economic History Revue*, New Series 53(1): 29-59.

Guest, R. 2004. *The Shackled Continent: Africa's Past, Present and Future.* London: Macmillan

Hall, D. 1964. *Ideas and Illustrations in Economic History*. U. S. A.: Holt, Rinehart and Winston Inc.

Hammond, M. 1946. Economic Stagnation in the Early Roman Empire. *The Journal of Economic History*, 6(Supplement: The Tasks of Economic History): 63-90.

Jones, A. H. M. 1974. *The Roman Economy: Studies in Ancient Economic and Administrative History.* Oxford: Basil Blackwell

Jongman, W. M. 2002. The Roman Economy: From Cities to Empire. In L. DeBlois and J. Rich (Eds), *The Transformation of Economic Life Under the Roman Empire* (pp. 28-47). Amsterdam: J. C. Gieben

Kolb, A. 2002. Impact and Interaction of State Transport in the Roman Empire. In L. DeBlois and J. Rich (Eds), *The Transformation of Economic Life Under the Roman Empire* (pp. 67-76). Amsterdam: J. C. Gieben

Lamb, D. 1983. *The Africans*. New York: Random House

Lintott, A. 1993. *Imperium Romanum: Politics and Administration.* Cornwall: T. J. Press (Padstow) Ltd.

Livingstone, I. 1968. Agriculture versus Industry in Economic Development. *The Journal of Modern African Studies*, 6(3): 329-341.

MacMullen, R. 1968. Rural Romanization. *Phoenix,* 22(4): 337-341.

Meredith, M. 2006. *The State of Africa: A History of Fifty Years of Independence.* Jeppestown, South Africa: Jonathan Ball Publishers

Mohr, P. et al 2002. *Economics for South African Students*. Pretoria: Van Schaik Publishers

Mommsen, T. 1996. *A History of Rome under the Emperors*. London: Routledge

Munslow, A. 2000. *The Routledge Companion to Historical Studies*. Suffolk: St. Edmundsbury Press

Oertel, F. 1934. The Economic Unification of the Mediterranean Region: Industry, Trade and Commerce. In S. A. Cook et al (Eds.), *The Cambridge Ancient History Volume X: The Augustan Empire 44 B.C. – A.D. 70* (pp 382-424). Cambridge: Cambridge University Press.

Petit, P. 1976. *Pax Romana*. California: University of California Press

Polak, P. 2005. The Big Potential of Small Farms. *Scientific American*, 293(3): 62-69.

Richardson, J. 1984. *Roman Provincial Administration 227BC to AD 117.* Bristol: Short Run Press Ltd.

Rostovtzeff, M. 1971. *Social and Economic History of the Roman Empire.* Oxford: Clarendon Press

Sachs, J. 2005. *The End of Poverty: How we can make it happen in our lifetime.* London: Penguin Books

Sachs, W. (Ed.) 2005: The Development Dicionary: *A Guide to Knowledge and Power*. Johannesburg: Witwatersrand University Press

Salmon, E. T. 1968. *A History of the Roman World from 30 BC to AD 138.* London: Methuen and Co., Ltd.

Salvatore, D. 2004. *International Economics.* Crawfordsville, USA: R. R. Donnelley and Sons Company

Sánchez-Palencia, F. J. et al 2006. Roman gold mines of the northwestern Hispania. In Á. Morillo and J. Aurrecoechea (Eds.), *The Roman Army in Hispania: An Archaeological Guide* (pp. 127-150). León: University of León.

Scullard, H. H. 1979. *From the Gracchi to Nero: A history of Rome from 133BC to AD 68.*London: Methuen and Co. Ltd.

Shelton, J. 1998. *As The Romans Did: Sourcebook in Roman Social History.* New York: Oxford University Press

Sinnigen, W. G. & Boak, A. E. R. 1977. *A History of Rome to AD 565.* New York: Macmillan Publishing Co., Inc.

Steenekamp, T. J. 2004. Income Taxation. In P. A. Black et al (Eds.), *Public Economics for South African Students* (pp. 155-182). Cape Town: Oxford University Press.

Steenekamp, T. J. 2004. Tax efficiency and tax reform. In P. A. Black et al (Eds.), *Public Economics for South African Students* (pp. 137-154). Cape Town: Oxford University Press.

Stephan, H. et al. 2006. *The Scramble for Africa in the 21st Century: A View from the South.* Cape Town: Renaissance Press

Stiglitz, J. 2002. *Globalization and its discontents*. London: PenguinBooks

Temin, P. 2001. A Market Economy in the Early Roman Empire. *The Journal of Roman Studies*, 91: 169-181.

Tosh, J. 2000. *The Pursuit of History*. Great Britain: Biddles Ltd.

White, K. D. 1956. The Efficiency of Roman Farming under the Empire. *Agricultural History*, 30(2): 85-89.

Woolf, G. 1992. Imperialism, Empire and the integration of the Roman Economy. *World Archaeology*, 23(3): 283-293.