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LUCAS ALAMÁN AS ENTREPRENEUR

BY

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CHAPTER I

INTRODUCTION

Mexico today is one of the most advanced and modern industrial nations in all of Latin America. That Lucas Alamán (1792-1853) is unanimously granted the honor of fathering Mexico's industrial revolution is more than ironic, it is almost unbelievable, since Alamán, on the basis of balance sheet accounting devoted to profit, must surely rank as one of the all-time business failures. Irony mockingly clings to Alamán in another more important way, for his lifetime economic activity was at loggerheads with and ran counter to his staunchly conservative political and social views. This activity paralleled a Mexican era violently torn and divided by the political idealism of Europe's enlightenment and a rising tide of anti-clericalism. Alamán fought against both these liberal trends throughout his life. While solidly traditionalist in his political and social views, a defender of the colonial hierarchical status quo, in terms of economic application and social progress Alamán was very much an end product of Mexico's own eighteenth century enlightenment. He tried to alter and update his nation's economy without changing its elite-oriented social structure. But, in accord with Mexico's long tradition of paternalistic

government and with the views of his own aristocratic class, he saw elites and statism (in enlightened despot manner) as being responsible for national welfare. Society and progress were to be shaped and directed from above. He either failed to understand, ignored, or tried to suppress the liberal political and social trend of Europe's enlightenment and industrial revolution. But in promoting that rational part of the enlightenment pertaining to science and practical economic application, Alamán unwittingly was responsible for creating the very middle sector social forces spawned by Mexico's industrial revolution that would ultimately overthrow the elite-oriented society he so very much believed in.

There is a great deal of historical discussion concerning whether Alamán should be considered an economic liberal, a progressive, a neo-mercantilist, or a forerunner of the cientifico era of Diaz. But there can be no doubt that first and foremost Alamán was a nationalist--almost without a nation--trying desperately to create an atmosphere of stability and security in which the Mexican economy could prosper. This fact goes far in explaining his economic conduct.

Alamán's entrepreneurial activities and interests were to range primarily from mining to agriculture to textiles, but included any business activity that offered the economically backward and bankrupt Mexican nation an

opportunity of becoming modernized and self-supporting. Before he died in 1853, don Lucas had managed to help convince foreign investors from England, France, Germany, and the United States to spend millions of silver pesos in his country; and this during a time in Mexican history when pesos were extremely hard to come by. Many of these foreign investors would live to regret the name of Alamán, Mexico, or both, and wish they or their money had never left London or Philadelphia. But in spite of Alamán's personal failures, by 1853 the first seeds of modern Mexican industrialization had been firmly planted. Mining had begun to show signs of marked improvement, and modern manufacturing operations (especially textiles) had taken deep root.

Several factors account for Alamán's long string of business failures. These include undercapitalization, overspeculation, poor management, and lack of experience and precedents in business methods. Because of the innovative type of mass production economic activity associated with Alamán that required security on a national level for success, the political anarchy of his age presented constant handicaps. Opposition from artisan groups, cultural antipathy, and opponents of changing social patterns created by modern factory organization were other serious handicaps. So were geography and the low levels of communications and production technologies.

But perhaps the greatest single handicap Alamán had to surmount was the total lack of credit institutions within Mexico in support of new manufacturing ventures requiring large capital sums for plant and equipment outlay. In England and other growing industrial nations, credit and related capitalistic institutions preceded then paced (in large measure) this industrial growth. In Mexico the opposite was true. Mexico had no meaningful institutional traditions necessary for modern industrial growth. She had no industrially-oriented banks or credit institutions, nor any modern corporative forms or money or stock markets. Nor did Mexico have any social institutions in support of this new industrial technology Alamán was about to borrow. The shell was about to arrive, but the innards were missing.

Nevertheless, Alamán, boldly, brazenly, and often with unparalleled audacity, tried almost single-handedly to force onto his nation a completely alien way of life. In normal times of relative colonial economic, political, and social security, this would have been an almost impossible task. In the complete anarchy of his day it was unthinkable. And yet, in the long run, he was to succeed.

CHAPTER II

MINING

The first of Alamán's many enterprises involved the formation of a joint English-Mexican stock company in August of 1822. While in London earlier Alamán had interested the financial house of Hullet Brothers in a venture to rehabilitate several Mexican mines defunct since 1810.[1] This enterprise was finally born under the name of the United Mexican Company, was in operation in Mexico within a few months with vast mine rights in Guanajuato, Guadalajara, Zacatecas, Chihuahua, Oaxaca, and within the state of Mexico itself.[2] By 1833 the company had spent the enormous sum of approximately $6,000,000 pesos in an effort to rehabilitate these mines damaged during the independence movement. Yet it received no return on its investment.[3]

The struggle for independence had a ruinous effect on Mexico's economy and particularly its mining industry. The war destroyed a great deal of property. It interrupted commerce by making internal travel hazardous.[4] The countryside was swarming with rival and jealous petty chieftains and mining towns became their prime targets. These towns soon became depressed and relatively deserted. Farms were

destroyed, deliberately or otherwise, and thousands of peasants abandoned their shacks and started a mass exodus to the cities. Anything of potential value to revolutionary chiefs became fair-game, especially when it was gachupine-owned.[5]

One of the greatest economic problems to plague Mexico during the nineteenth century stemmed from the anti-Spanish bitterness displayed during the independence movement personified in the Alhondiga massacre in 1810 at Guanajuato, and other times during the republic period. This caused a mass exodus of capital that had a devastating effect on the Mexican economy. Some authors estimate that as many as $180,000,000 Spanish owned pesos found their way out of the country, either in the form of silver, gold, or jewelry. Potash estimates that at least $60,000,000 pesos left this way because of fear, and that a great deal of capital that could have been used productively never found its way into the Mexican market because of insecurity created by unstable political conditions.[6]

The shortage of capital haunted Mexico, and especially Alamán, throughout the 1821-53 period. Solvent and prosperous in 1808, by 1820 Mexico was a nation heavily in debt, constantly pressured for foreign exchange funds. By the end of the financially disastrous Iturbide administration this public debt soared to $76,000,000 pesos.[7] Until 1853 Mexico annually displayed a foreign exchange deficit that was staggering, sometimes reaching $17,000,000 pesos yearly;

a deficit and unhealthy financial barometer that set the tone for a great deal, if not all, of Mexican economic life throughout the Alamán period.[8] Added to the problem of fiscal instability was the fact that Mexicans, for numerous reasons, some obvious, did not want to invest in their own economy. By means of a complex method of computing gross national product in the year 1829, Mora estimated that there should have been approximately $31,000,000 pesos available for private economic investment in Mexico, internally generated, but that none of this, because of chaotic political conditions, found its way into the Mexican economy.[9]

The breakdown of commerce, agriculture, numerous artisan endeavours, and the enormous flight of capital from Mexico all had their devastating effect on the economic life of Mexico. But equally important as a contributor to national instability was the almost total collapse of mining. The nature and extent of this mining collapse caused by the independence wars manifests itself in several ways. In 1796 the Mexico city mint (the only one in Mexico at that time) coined a total of $25,644,627 pesos, both gold and silver, and during the next two years this figure, while slightly lower, reflects relatively high level of mining activity. During the period 1800-1810 coinage figures reveal a degree of decrease in mining production, averaging somewhere around $22,000,000 pesos coined annually. In the revolutionary year 1810 only $19,000,000 pesos were coined.

In 1811 the figure dropped to $10,000,000 and by 1812 the drop had become drastic, falling to the unheard of low of $4,409,266 pesos.[10]

While exhibiting some mild increases from the low of 1812 during the following years, mining was not to regain its former economic prominence for several decades. Now a depressed field, the once basic economic source of colonial strength and pride became an enormous liability and handicap, and a major cause of depression that engulfed the entire Mexican scene from Oaxaca in the south to Chihuahua in the north.

Mining destruction during the 1810-1821 period had several causes, some natural. When armed bandits or armies seeking to capture wealth raided royalist mining strongholds and failed, they usually demolished mines in order to deprive the government of its greatest fiscal source.[11] But by far the greatest cause of damage stemmed from the abandoning of numerous mines, thereby allowing normal deterioration to proceed at the rapid pace that non-maintenance guaranteed. Mine flooding was the most damaging result of this.[12] In once prosperous Zacatecas many of the major shafts of the veta grande became flooded after abandonment. The water sometimes reached enormous depths.[13]

Any number of foreigners visiting Mexico in the early Republic period reported similar conditions elsewhere.

Bullock, visiting the region of Themascaltepec in 1821, noted the ruined conditions of amalgamation haciendas destroyed by armed bands during the war, as well as the tremendous mine flooding caused by lack of maintenance.[14] In the great Barranco mine shaft in the Bolanos district Lyon reported similar conditions while visiting in 1826. But there, because of extremely porous earth, the flooded conditions were accompanied by numerous cave-ins at unknown points.[15] The famous Real del Monte mines of the Regla family in the state of Mexico were almost totally ruined. Comstock, quoting Ward during his stay there, notes tremendous damage caused by flooding and other conditions.[16] Lyon, visiting in 1826, added that

> . . . there are also natural causes for mine ruins: abandoned, then water fills into shafts, soft spots cave in as water rises, timber rots, tropical rains periodically wash a great deluge of garbage into the shafts, wild luxuriant growth runs rampant, more garbage falls into the shaft, side earth (of shaft) loosens, becomes very unsafe, and sometimes new timbering is needed in shaft where none was ever used before.[17]

And Madame Calderon de la Barca, visiting the same mine eleven years later, tells of the great repair activity still underway.[18]

In Guanajuato the war brought uniquely disastrous effects. The massacre by Hildago's forces at the Alhondiga in 1810 needs no repeating here, but the economic effect of this was disastrous for the area. There was an enormous loss of capital both captured (at least $3,000,000 in the

Alhondiga alone) and later in flight from the area. Because of its importance as a mining center Guanajuato became a heatedly sought after prize for revolutionary forces.[19] The flight of refugees from here to Mexico city was especially great. Alamán and his family made the exodus shortly after the massacre. The great Valenciana shaft in the enormous vein of the Veta Madre lode, because of abandonment and lack of capital to rework same, became flooded to the depth of 2,000 feet; not only its vertical shaft but the multitude of horizontal shafts projected laterally at various depths.[20] Revolutionaries destroyed anything they could not hold. They burned machinery used on shaft-sites for hauling ore and mine drainage, and machinery and buildings at ore processing sites.[21] The amount of water flooding became so great that it took more than sixty years to make effective progress in rehabilitating this particular shaft. Poinsett, in 1822, tells of the rampage of burning under the revolutionary leader Minas after he unsuccessfully attempted to capture the city.[22] Every visitor to Mexico during this period, Poinsett, Bullock, Lyon and many others including the British charge d'affairs Ward, made Guanajuato a must on their tour agenda, and all report on its greatly devastated condition.

Eighteen at the time of Hildalgo's revolutionary movement, the sack of Guanajuato and the Alhondiga massacre were to have a lifelong conservative political effect on young Lucas, for it was there that he was born

in 1792. His father was a relative newcomer to Guanajuato. After his arrival there in 1780, he then went on to make his fortune in the related mining field of commerce and lending. His father extended credit by supplying miners with various equipment and over the years had amassed a sizeable fortune. Alamán's parents' house also served as a quasi-bank, the first floor being used to store mining equipment loaned out against anticipated silver payments discounted in accordance with mining ordinances. Later in life this inevitably involved him in numerous direct mine ownerships.[23]

From his maternal side Lucas descended from a long list of old-line Guanatejenses who had become extremely wealthy directly from mining, the famous Cata and Mellado mines being numbered among their possessions. By the 1730's this side of his family was rich enough to spend the then enormous sum of $26,000 pesos to build a church and convent for the Jesuit order which they literally established in the city.[24]

Rich, of an aristocratic family and with intellectual leanings, young Alamán would seem to have had all that one could hope for without becoming entrepreneurially minded. To understand many of his later attitudes and activities it is important to understand the nature and spirit of Guanajuato, or any mining town.

While it is true that in theory the Spanish crown owned all new world mines, in reality there was a tremendous amount of speculation and fluctuation in riches in all new world mining towns. The crown, assured of its royal fifth

in lieu of its quicksilver monopoly regulated through Mexico City, pretty much left all phases of mining, from prospecting to refining, to those in the business. The regulation of the industry was under the jurisdiction of the Director of Mines who ruled on such matters as claims authenticity, vein encroachment, morals (along with the church), safety conditions, and a whole host of related matters.[25] But daily life in Guanajuato and similar towns was regulated in large measure by local tradition and custom.

Guanajuato was a silver mining town. Everyone in town was effected by silver. They lived it, talked about it, planned their entire lives around it. They mined it, chiseled it, beat at it, ground it, pulverized it, hauled it, auctioned it, processed it, paid wages with it, bartered it, formed objects with it, shipped it, stole it, fought and killed for it. They especially smiled at it. Mining in Guanajuato, as in any other town of the world, from California to the Yukon to Witwatersrand to Silver City, was a spirited, lively, and dangerous life. Great fortunes were made and lost overnight. Prospectors, once beggars, became rich on new bonanzas, then poor again, then rich. Gambling was rife, so was prostitution. Towns were "wide open," credit and good times fluctuating in tempo with rising and falling prosperity. Sartoreius tells of lowly peasants he knew, who, striking it rich, shodded horses with silver, built opulent mansions and religious benefices

beyond reasonable proportions.[26] The hills were full of silver prospectors, scratching, picking, hammering, hoping against all hope for that one strike that would make them rich, for that one bonanza that would elevate them to prominence in the eyes of their fellow men and God. Many nineteenth and twentieth century aristocrats originated from these humble origins. Here today, gone tomorrow. Prospectors dunned credit houses, like Alamán's for a stake, or for just one more stake, insisting that this time they had a sure thing. All they needed was a little food, a few pack animals, some tools, and riches were sure to follow. Some individuals made it, most did not. Some lending houses, like Alamán's, made it; others went bankrupt, or resigned themselves to building fortunes the slow and hard way, straining natural emotions to provide an air of stability to a raucous and spirited environment.[27]

On the working level drunkenness was common to mining towns, with most miners living within cycles of feast or famine determined by a week's diggings. Gambling, knife and fist fights were normal and common. So was death. The church was ever-present, offering last rites or mass prayers to miners before entering mine shafts; shafts that contained makeshift altars at various levels hundred and thousands of feet beneath the surface. A curious breed miners, and prospectors, born of a perpetual and colossal optimism and gambling spirit; rough, dirty, doomed to die broke and at an earlier than normal age.

There is still today a certain exciting spirit, peculiar to a mining or other town where men gamble with nature against hard odds for quick riches and other satisfactions, that creates or captures a certain human breed. Perhaps the sight of so much wealth, or the touch or smell of precious metal creates this breed, a gambler who in many respects is peculiar to this and related industries. It was in this environment and captured by this spirit that Alamán spent his childhood, youth, and early manhood. His entire life was apparently guided by a miner's eternal optimism, bonanza size schemes, under the spell of a gambling fever that only a mining or oil prospector could understand.

Considered somewhat precocious as a child, at thirteen Alamán was honored by the enlightened governor Riano for excellency in translating, among other classical works, those of Virgil and Horace.[28] Throughout his life a devotee of the arts and sciences, a believer in the benefits of modern scientific improvements, Alamán from an early age also began to devote himself to the study of mining; both metallurgical and excavating aspects. He graduated from the famous school of mines established in 1792 in Mexico City by Elhuyar, was an end product of Spain's enlightened economic endeavor of the late eighteenth century, and became an intellectual leader of his country. Shortly after the turn of the nineteenth century, Guanajuato, like many other mining centers of New Spain,

experienced a gradual decline in mine productivity and rising operating costs. This was caused by increased cost of operations at greater depths and dwindling of high grade ore reserves.[29] Young Lucas, to aid his family's declining fortunes, ended his mathematics studies in 1804 and began to frequent the Cata and other family mining interests regularly seeking methods to improve production. He even developed a crude awl for chipping ore.[30]

After the family's flight from Guanajuato to Mexico City in 1810 Alamán pursued studies, aside from liberal arts, in chemical engineering and mineralogy at the Real Seminario de Mineria. He studied such works as Huay and Lavoysier. In 1814, now twenty two, he left Mexico for Europe; first Spain, then France, Germany, Italy, and ultimately England. He payed particular attention to modern German mining techniques. He studied under Huay, came to know Humboldt well and to excite Humboldt's interest in later mining investment ventures. Alamán was especially interested in the latest sulphuric acid method proposed for separating gold from silver, and in the use of steam power for mine drainage and related purposes.[31]

Alamán remained in Europe until 1820. Aside from German mining technology he was probably most impressed by the state of the industrial revolution in France but especially England, the economic writings of Adam Smith, the horrors of the French Revolution and the political

writings of Edmund Burke. He was especially impressed by English textile industry equipment. He returned to Mexico in February of 1820 not only greatly enthused by Europe's industrial technology but with a strong desire to convert Mexico into a modern nation on a scale comparable to European powers. Later during this same year, as a result of Riego's successful revolution in Spain and the proclamation of the constitution of 1812, Alamán returned to Europe, this time as a representative from Guanajuato to the Spanish Congress.[32]

During the crucial first days of Mexico's independence period when national survival was very much in doubt, Alamán became convinced that the only way for Mexico to achieve greatness and stability was through a massive infusion of foreign capital and technology. He felt that as a result of the turmoil of the previous ten years there was not enough capital left in Mexico to undertake the enormous task of national economic recovery. To Alamán it then appeared very simple; given political stability, with foreign aid Mexico could rehabilitate her mining economy, and this necessarily must lead to general prosperity. Mining was the key, and to him it was axiomatic that agriculture and commerce and industry depended on mining's revival for their own welfare. While overlooking Adam Smith's qualification of the real value and use of precious metals, Alamán seemed to be very strongly of the opinion that *laissez-faire* economics as espoused by Smith ought to

prevail to rebuild Mexico's economy. After returning to Mexico in 1822 don Lucas strenuously fought for liberalization of property ownership laws that especially pertained to mining interests. During 1823 he pushed through the Mexican Congress a revision of colonial legislation in order to permit the introduction of foreign capital and lease rights. He consistently used his growing personal power and government influence to assist foreign investors eager to exploit Mexican mines.[33]

It is difficult if not impossible to account for the exact amount of influence attributable to Alamán, directly or indirectly, in coaxing foreign capital into Mexico. But one can easily imagine the eternal optimist, youthful, intelligent, with high social position and graces, background and esteem, and his governmental membership, all having their effect on the European scene. In 1837 Madame Calderon de la Barca wrote "I might tell you how don Lucas Alamán went to England, and raised, as if by magic, the enthusiasm of the English."[34] While it was not magic that enabled him to excite the English to Mexican investment, it was undoubtedly a combination of his character, Humboldt's writing of fabulous wealth, the by now legendary tales of the enormous riches of New Spain, as well as the smell of great and quick personal profit that sucked in so very much English money during those first few years. Investors seemed never to weary or shy-away when confronted and smothered by his indefatigable optimism. Alamán was endowed not only with an eternal optimism that

saw him risk large capital sums repeatedly, but also with a huckster's ability to raise capital and human interest and hopes in any venture no matter how impractical. But, unfortunately, he seems also to have been a born-loser, blessed with an entrepreneurial kiss-of-death.

As a result of the opening of new world markets and the end of the colonial regime, Europe, and especially London, brimmed with enthusiasm and anxiety for Mexican mining investment. Alamán was living proof, corroborated by Humboldt and the writings of several of their countrymen including Ward then sending information back, as to the feasibility of profitable mining investment. The English response was enormous.[35] Mining stock companies sprang up overnight in droves. Millions in shares were immediately subscribed. Before the London panic and crash in late 1825 countless amounts were raised, estimated as high as $25,000,000 pesos. Unfortunately, of the 70-80 companies formed, only 18 eventually found their way to a working status in Mexico. Most were outright frauds, others were near-frauds in that their mines were old beat-out worn-down abandoned wrecks that had been depleted long before 1810, or never had been productive.

The fever that initially gripped London cooled off in 1825, attitudes soured, and legitimate companies found the going even rougher than normal. Additional money as required under original stock terms became difficult for English stockbrokers to raise, and American field operations

became hard pressed for cash.[36] Of the handful of surviving companies the United Mexican Company promoted and formed by Alamán and his English associates had spent approximately $6,000,000 pesos by 1833 without one shilling in return.[37] While unique in its operational scope by owning rights to more than forty mines scattered throughout Mexico, including the Alamán's Cata mine in Guanajuato, United's rehabilitation operations can be taken as typical of general problems encountered by all other companies in Mexico, with variations usually depending on geographical factors.

The original cocky English attitude concerning Mexican mining investment is probably nowhere better manifested than in the writings of Bullock, whose work appeared in London shortly after his 1821 visit to Mexico. Bullock felt that English ingenuity and technology could surmount any obstacle. Mexicans, he thought, were technologically incapable, even in good times, of properly working their mines.[38] Even the cautious Ward, fully aware of the difficulties involved, concluded that mining offered a potentially profitable investment. In general, the attitude throughout England was one of gleeful avarice and reckless confidence in a "superior" nation about to show Mexicans a thing or two about the advantages of a modern civilization.

Mining ore in Mexico, as elsewhere, on the surface is a relatively simple task. You dig a hole in the ground, scoop it up, bag it, and go home rich. If you are lucky

the vein will be wide, easy to reach, require a minimum amount of operations for excavation, have a rich and high ore content, and a sound market for disposal. Until the advent of foreign capital in the 1820's mining in Mexico was done by a relatively uniform and direct method, in large measure dictated by geographic factors such as water table level, terrain, material stratification, rainfall, and similar factors. If a mine shaft bored into terrain (almost always mountainous in Mexican mining) above a certain water table level, drainage would present a minimum problem; or conversely, drainage could become a terribly expensive proposition.[39]

The mines of Guanajuato, while not all managed by the United Mexican Company, offer a good example of conditions both before and after 1810. Humboldt was amazed at the enormous amount of ore, unfortunately usually low grade, that Mexican mines contained. The Guanajuato district was a prime example of this condition.[40] The Veta Madre of Guanajuato ran for miles at three different levels, sometimes all three subterraneously joining to form one enormous vein hundreds of feet wide. Digging vertical shafts into this mother lode, miners picked their way down with a screw type chisel and sledge hammer while others, half-naked, crawled up wooden ladders hauling ore filled leather sacks to the top, unloaded, and returned to repeat the cycle. Lighting and ventilation were constant problems. Zacatecas alone during the 1730's used eighty tons of candle tallow

and 3,000 pounds of candlewick for this purpose. Cave-ins, and materials supplies for fuel and building purposes convenient to the environment, were always other important factors. But the greatest single mining problem became drainage, the cost and complexity of which increased as shafts deepened.[41]

In Guanajuato, where a relatively high water table prevails in addition to normal heavy seasonal rainfalls, drainage problems became acute towards the end of the eighteenth and start of the nineteenth centuries. West describes the mechanics of the actual drainage operation at that time: "In Guanajuato . . . a mule powered malacate was used to drain mines: this device consisted of a capstan, or spindle, turned by mules. Two long ropes with water bags tied to one end were wound on the spindle and were alternately lowered and raised from the drainage shaft by the revolving section of the capstan."[42] Lyon gives the annual budget for 1795 for this one operation on the famous Barranco mine of the Bolanos district, emphasizing the enormous expense involved.

> To maintain the mine above a certain water level forty four malacates were needed, and the annual budget for this operation alone ran $397,612 pesos; involving 2,200 mules, 176 drivers by day and night, plus feed, 88 assistant drivers, 10 watchmen, 88 water bag handlers, 6 signal (to hoist) men, 16 empty water bag handlers, and a variety of accountable items such as rope replacement, mending straps, water bags, houses, machiners, soap to ease friction of working pieces, whips, water skins, candlewood for evening burning for lighting purposes, and numerous other small items.[43]

As the years wore on and mining operations deepened and expenses soared, the need for credit and large capital sums to cope with new mining conditions became more pronounced. The colonial regime attempted to meet this problem by creating the Banco de Avio de Minas in 1784 as a lending institution. But crown European financial needs especially during the Napoleonic period made this institution totally ineffective. It was finally abolished legally in the early 1820's.[44] In large measure the problem of declining return in Mexican mining was one that would have required a massive capital infusion and increased technological levels to correct, even without the destructive effects of the 1810-1821 period. The metallurgical aspect of mining vainly sought cheaper and more efficient methods of processing low grade bulk ore and of separating gold from silver. This, as well as shortcomings in direct mining technology, were to play important parts in the depressed state of Mexican mining until cyanidation process technology and massive capital investment revolutionized mining in the 1880's.[45]

Considering the problems normal to mining in this period, foreign capital and technology would have been more than challenged by the task at hand. But finding the Mexican mines in an almost complete state of ruin, foreign investment was committed to a long and hard road for mere survival, much less for profitable operations. Between 1823 and 1829 United and other companies bore tremendous

unforeseen expenses. Throughout Mexico the first difficult task confronting foreign companies was merely to reach destinations. Roads and terrain were often impassable. Where steam power was scheduled for use, as in Real del Monte, transport problems were especially difficult. Entering via Vera Cruz machinery was moved piece by piece on light English wagons. Roads were widened or newly built to handle this "strange" traffic, where before mules or humans had hauled all necessary equipment or supplies. And, once on location and assembled, mines were frequently pumped for months and even years before water levels had been sufficiently reduced to allow large-scale resumption of mining. Some never could be drained, in spite of the tremendous effort and capital expended.[46]

No one in England had realized the extent of mine damage, nor the physical enormity of the mines themselves as compared to relatively puny European mines. Because of this fact much European technology was unsuitable to the New World scene. Foreigners even found that they were able to learn a great deal from the high level of Mexican amalgamation technology.[47]

As draining operations progressed it usually was found that most mine support timber had rotted requiring replacement. In places such as Guanajuato where scarcity of wood for fuel prevented steam power usage, English firms like United found that draining water that had accumulated thousands of feet vertically and laterally at great depths

an almost impossible task to accomplish.[48] Vast undertakings, such as adits dug into a mountainside at various levels calculated to cut into a flooded mine shaft at a certain depth to provide drainage, were undertaken; and sometimes, after months and years of digging these adits, poor calculations resulted in missing flooded shafts completely. In an attempt to directly route water into the amalgamation process to eliminate the costly mule train method previously used, canals were dug and rivers and streams were sometimes virtually rerouted. And in countless other costly ways capital was consumed at an alarming pace without significant results.[49]

By 1827 the United Company had itself expended almost $4,000,000 pesos throughout Mexico and was still bailing out water. In the early 1820's foreigners, especially Englishmen, had entered Mexico confident of easy success, quick riches, and national glory and prestige to be won in accordance with their advanced level of technology. By 1830, however, most had failed. Those that remained were struggling for their financial lives.

Not only technology, terrain, and devastated conditions worked against them, but political turmoil and cultural antipathy were hostile factors to be overcome. Local petty chieftains constantly put the squeeze on them. Roads generally were unsafe for travel or became safe only after payoffs were made. Bullock describes one incident of local

distrust, fear, or reluctance of Mexicans to use new machinery. Laborers refused to use an English wheelbarrow, insisting on the time-proved and familiar method of two men pulling refuge from a mine shaft opening on a leather apron to dump in some distant field; hauling half as much waste and expending at least twice the labor and time.[50] And this cultural conflict was repeated in similar scenes throughout Mexico.

It is not certain just how much of Alamán's own money was involved in the United Mexican Company, or whether he retained any working interest in the company or of the Cata mine after being politely pushed out in 1829. Long before this time the indefatigable don Lucas was busily engaged in promoting several other pet projects of his. In mid-1829 Alamán officially "resigned" from United. He was apparently forced out by English majority owners pressuring all participants for additional money and claiming direct management privileges because of hardships already experienced.[51] Alamán, who had dreamed of another great bonanza of at least the Cata mine, was understandably discouraged by this event. He also was greatly disappointed in the great immediate expectations he had held for foreign technology. His biographer, Valades, merely states that this enterprise, as all other mining enterprises Alamán became engaged in, met with financial failure and great disappointments. These failures apparently had a great

deal to do with his critical and revolutionary change in economic thought at this time, and as later manifested in the creation of the Bank de Avio in 1830.[52]

CHAPTER III

AGRICULTURE

In 1825, with United and Alamán just getting started, and with numerous other foreign mining firms joining the rush, Alamán, still filled with high hopes, stopped in Celaya enroute from Mexico to Guanajuato. According to Valades, it was at this time that ". . . he thought of another great enterprise. Celaya had numerous small wool weaving workshops. Alamán believed to see here the great future industrial center of Mexico. He immediately undertook the first steps for the establishment of a textile factory, a modern factory of looms comparable to those he had admired while in England."[1] The townspeople, including the clergy, were extremely receptive to Alamán's proposals, and they encouraged him in every way.

Lucas then and there sold his Guanajuato birthplace to J. G. Williamson, the director of the Anglo Mexicana company, for $32,000 pesos. With this money he immediately began construction of a new and modern factory. Valades says ". . . it was a beautiful structure, two great doors

adorned by doric columns, a splendid stone facade, large rooms."[2] To Alamán this was to be a grandiose project that would revolutionize Mexican industry, that would give the country its first push towards modernization and an industrial revolution.[3]

In support of the textile project at Celaya, on September 9, 1826, Alamán purchased the hacienda de Trojes in the immediate vicinity for the total sum of $55,000 pesos; a down payment of $5,000 pesos, with $7,287 due six months later on March 9, 1827, and the balance due five years later on March 9, 1832. Trojes was to do for the national agricultural economy what Celaya had been projected to do for industry. At the same time Alamán also took possession of the smaller hacienda de Juan Martin and the rancho de San Lorenzo.[4]

Trojes was vast. It covered some 107 caballerias, or approximately 12,000 acres, of which approximately 22 caballerias were irrigated land, one potentially irrigable, sixteen subject to rainfall, eleven fit for renting out, twenty one without trees but with good grass-lands fit for pasturage, and the balance hilly and barren terrain.[5] It was to be the "model hacienda" designed to revolutionize agriculture in support of the Celaya project and others as well. When Alamán took possession the farm had been abandoned since 1810. Tenant and other houses were rotting shells, both people and furniture missing.

Hence the task of renovation involved tremendous expense. Between this and the Celaya factory project and, his money from the sale of his house in Guanajuato exhausted and insufficient for his goals, Alamán found himself obliged to borrow large sums of money from his father-in-law, and ultimately to resort to church loans.[6]

Throughout the year 1826 Alamán resided in Celaya directing both factory and Trojes operations. But he was primarily absorbed at Trojes fixing boundary markers, opening wells, erecting a chapel, planting olive trees, pear and other fruit trees of endless variety, stocking cattle, mules, and wool bearing animals including vacuno and sheep. He even installed beehives. He had scoured the earth for countless exotic plants, planted anything that would grow, also grapes, in an effort to make Mexico entirely free from foreign economic wants. But he devoted special attention to wool bearing merino sheep and French livestock technology.[7] His effort, vision, dreams, enthusiasm, and operational scope were unlimited. His zeal seemed to overcome whatever doubts friends and family may have had about the wisdom of economic investment within the politically troubled nation or his own management capabilities.

The mining disappointments of Guanajuato and his withdrawal from United in 1829 hit Alamán at a particularly vulnerable time. He was forced to resort to a mortgage to

save Trojes and to suspend work on the factory at Celaya.[8] The works at Trojes more or less remained dormant until 1832. Celaya for numerous reasons became and remained a financial failure until it finally died in its original form in the mid 1830's. During this time Alamán, undaunted but somewhat more wise by his past experience, directed his efforts towards first a revolutionary industrial concept that found the government taking an active and direct role in national economic development along modern industrialization lines through the Bank De Avio, and secondly, to his gigantic textile project at Cocolopam.

CHAPTER IV

THE BANK DE AVIO

The creation of the Bank de Avio was the direct result of Alamán's governmental influence. By 1830 Alamán had every reason to be discouraged with not only his personal entrepreneurial progress but with the state of the Mexican economy as well. Neither had done too well since independence. The economy had largely disintegrated between 1810-1821 and by 1830 had shown no signs of recovery. Hounded by foreign creditors, the mines still largely in shambles, native commerce and artisan industry languishing under a tariff that followed a _laissez-faire_ pattern, plagued by internal political strife and foreign intrigue, Mexico all but fell apart during this period. In fact, Mexico was a nation in name only until well after the death of Alamán in 1853, and the confusion normal to the times presented added difficulties for any entrepreneurial minded individual.

Alamán's economic outlook changed markedly by 1830. In 1820 he advocated a _laissez-faire_ policy, but by 1830 he was pressuring for government underwriting, planning, and protective tariffs for new industries. In 1820 he felt that a liberalized mining code was the key to national economic welfare. Commerce and agriculture would falter, he

argued, without a healthy mining economic base to support them.[1] But by the late 1820's his thoughts changed sharply. In 1829, ". . . disheartened by foreign capital's failure to revitalize the economy, convinced also that Mexico had suffered a drastic decapitalization as a consequence of the flight of Spanish capital after 1810, convinced also that it had been humanly impossible to persuade local capital to invest in internal productive enterprises because of political insecurity, Alamán concluded that the only source of money from which Mexico would be able to draw on for industrialization must be the state."[2] Chavez Orozco seems convinced that Alamán by 1830 was himself convinced that "foreign investment" had actually created much harm for Mexico, but it seems closer to the truth to state that Alamán did not think foreign capital harmful, but simply that it had not produced the desired results. He felt that in order for Mexico to stabilize herself, to remain politically intact and independent as a nation, it was necessary to become industrialized along modern capitalistic lines.[3]

Speaking about a momentary spurt of tariff protectionism in 1829--a tariff designed to protect guild artisans but not to foster modern manufacturing--Alamán had this to say "The purely prohibitive tariff system alone can't make industry flower; other elements are necessary, such as a large population, adequate capital and machinery."[4] At this

same time he had some other revealing comments to make about the Mexican economic situation, stating that ". . . Because this type of business [modern industry] requires more diligence the only men in this country who get involved are those who can't find means of livlihood in other ways . . . so agriculture and mining attract preference . . . our population isn't large enough for many men to get involved in the textile industry . . ."[5]

To Potash, whose position seems more reasonable than Chavez Orozco concerning Alamán's attitude on foreign capital, "Alamán in 1830 adopted the theory that national independence required the development of a local and modern manufacturing industry, and that this endeavor should be directed towards developing industries that produce articles of greatest local consumption and those easiest to establish, such as cotton, woolen and linen textiles for mass consumption [vice expensive items limited to opulent few] and that certainly foreign capital was necessary to aid this development."[6] In fact, as it later developed, it was French capital that gave birth to the Cocolopan project at Orizaba, a great deal of it allied with Alamán.

Nor did Alamán feel any severe change in attitude concerning the importance of mining. He now rightly considered it as one vital element in the overall economic base. It seems proper to say that Alamán's economic thought was maturing, that he began to look beyond an economic level of

growth tied directly and only to hard money in circulation as a result of precious metal mine productivity. In either case, Alamán, following his political rise after Bustamante came to power in December of 1829, pushed strongly for the creation of the Bank de Avio under government tutelage for the express purpose of developing the Mexican economy along modern industrial lines.[7]

The Bank de Avio was created by congress during the conservative regime of Bustamante by the law of October 16, 1830. It was directly charged with the task of developing modern Mexican industry. By the time of its collapse in 1842 the bank had scattered more than a million pesos throughout Mexico in an attempt to accomplish this mission.[8] From its inauguration to its failure it is difficult to separate Alamán's own personal interests from those of the general public; Alamán having availed himself of at least $100,000 pesos of bank funds for personal promotions or on behalf of close friends.

The Avio project was not truly a bank in the modern sense but closer to a committee entrusted with spending money in an attempt to modernize Mexican industry. It was neither a bank of emission nor deposit, had no regular banking facilities, nor any effective fiscal security regulations controlling reserve percentages nor philosophy of pro-rata support to key industries. Ironically, its greatest fault as a bank throughout its short life was the fact that it usually had no money.[9]

In order to "foment national industry" the law creating the bank authorized its capitalization to a maximum of $1,000,000 pesos, under terms that authorized a "government loan" of $200,000 pesos to enable the bank to function immediately. The remainder of authorized capitalization was to come from 20% of the custom duties on future cotton textile imports at Veracruz and other ports until the full authorized capitalization sum had been reached.[10]

Administered by a Junta whose first president was Alamán, the bank directly negotiated with foreign concerns to purchase the latest and most modern textile equipment, concentrating primarily on cotton gins, looms, and spindles from United States' manufacturers. This equipment was to be sold or consigned to would-be Mexican manufacturers under favorable long-term and low interest credit terms, amounting to 5% per annum over a term to be determined by the committee. Even though the preferred industrial branches to be developed would be textile ventures involving cotton, wool, and silk, the junta was empowered to perform the same service for other industrial branches and for agriculture.[11] While the reasons for the "banks" ultimate failure present interesting accounts of personal favoritism, gross inefficiency, and other sometimes entertainingly lurid details, the bank played a vital part in the history of Mexico's modern economic development. It established a precedent of direct government economic intervention. It created numerous

incipient modern factories and a broader economic base. It also provided the country with its first true credit institution designed to aid and develop industrial growth. Nowhere throughout the colonial or early national period had this service previously been available.[12]

Before the establishment of the Bank in 1830 the only known colonial credit sources or institutions in Mexico were the Bank de Avio de Minas created in 1784, the National Pawnshop, private merchants or individuals, and the church. None of these institutions were geared to aid industrial development. They primarily concentrated and restricted their interest to commercial or other activities. The Bank de Avio de Minas was designed to aid increased capital needs of miners necessitated by higher production and maintenance costs in the late 18th and early 19th centuries. Miners had long complained of this capital strain and the fact that local merchants were either unable or unwilling to provide same. The bank was designed to augment merchant aid to mining only when this aid proved inadequate. But by the time of the chaos created in Spain during the Napoleonic wars, the bank, stripped of meager funds allotted for that purpose, became absolutely ineffectual. It finally was officially terminated in the early 1820's. The national pawnshop had no bearing whatsoever on industrial growth or promotion. It restricted its work to a welfare operation aiding the lower or most unfortunate classes.[13]

The only other potential sources of credit were the commercial classes and the church. During colonial days commercial classes usually had sums of money available. These sums were accumulated and held for the purpose of paying for consigned merchandise displayed at the gigantic fairs following fleet arrivals from Spain or the Philippines.[14] While there was a great deal of lending from this class, especially to miners, it was not of a long term or of a truly developmental nature.[15] There was no real capital accumulation to keep pace with increased mining capital needs, and absolutely no capital for expansion or new industrial development.[16] In fact, this was expressly forbidden by Spanish law in order to protect Seville and other Spanish merchants and industries. Even after the liberalized period of Charles III and the collapse of the Spanish empire this situation was not eased. For reasons already noted, it became more accute. Internal Mexican trade during the late empire period was always relatively small-scale, unorganized, without any real long term industrial development goals. Instead of credit facilities being available to artisan classes to encourage expansion, it was usually the artisan who provided credit to his needy or wealthy or socially prominent customer.[17]

The church was not only the greatest potential source of credit in the late colonial period but during the early national period as well. But the church restricted its

lending activities to the mortgage field, securing its loans directly by land or other real property.[18] While Lobato is not only too harsh but also misleading when he says that ". . . the credit facilities of the church were so extensive that by the end of the 18th century one could well say that the territorial property of New Spain was one great big mortgage constituted in favor of the clergy," there is general truth to this statement.[19] A great amount of church control and power stemmed directly from this factor. Some authors claim church net property worth during the early national period was $300,000,000 pesos, and steadily growing in spite of frequent government fiscal raids employing troops or forced loan techniques.

Church mortgage loans were usually made at the very resonable interest rate of 5% per annum. They were often given in excess of collateral value, and probably just as often given to prominent persons as a means of further social influence.[20] Many or probably most of these loans were made to landowners, to hacendados, and no known mining or other industrial loans are known to have existed.[21] For our purposes it is important to note that this money went into highly non-productive or agricultural avenues and was never loaned with intent to further industrial development. In time of dire need Alamán frequently resorted to church loans, but these loans were always secured by real personal property. They were never made against an industrial enterprise as security.

At the time of the founding of the Bank de Avio in December of 1830, Mexico was still economically tattered. Her mines and agriculture were wrecked. Her once healthy artisan industry was threatened and weakened by foreign imports. Her foreign debt was staggering and rising and her mounting balance of trade deficit created further serious economic strains; both depressing indicators stemming in large measure from the bitter political and military divisions that were to remain a part of the Mexican scene for many years to come. None of this created a healthy atmosphere for eoncomic growth or stability. The church, the only real institution that could have provided capital necessary for economic rehabilitation and development, preferred to invest its money in real property. Foreign investors were attracted by Mexican mines and commerce. Great Britain, directly filling the textile supply vacuum created by the fall of the Spanish empire, was not, until much later, interested in creating a modern large scale Mexican textile industry that would threaten their new found market.[22] In fact, British laws at this time expressly prohibited the export of any such machinery. And so the Bank de Avio, sorely needed, was created.

During the first few years of the bank's life Alamán, when not in hiding for political reasons, worked feverishly to promote its ends. Under his direction the bank contracted for a great deal of textile equipment from abroad, mostly

from the United States. He simultaneously attempted to create a broad indigenous entrepreneurial interest.[23] Many new companies were literally forced into being. The political chief in each district was pushed into forming stock companies, they in turn pushing local notables, government officials and churchmen to subscribe to stock. In Guanajuato Alamán personally persuaded the governor to organize four stock companies. While superficially successful, no one really thought of it in progressive terms, usually considering it merely as another political pressure for pay-offs to keep in good standing.[24]

Since Alamán left few personal and detailed monetary records it is difficult to determine the exact extent of his financial involvement in Bank de Avio activities. During the bank's first lending period between November 1831 and October 1832, $193,890 pesos was "charged" to a total of eleven persons. The largest single loan was $30,000 pesos debited against E. Antunano y Cia, the founder of the great textile works at Puebla known as La Constancia, which began production in 1836. The Compania Industrial de Mexico Tlalpam, located in the suburbs of Mexico City, received $25,000 pesos. This company had been formed before the creation of the bank, under the personal initiative of Alamán, to manufacture cotton textiles.[25]

On February 1, 1832, the La Compania Industrial de Celaya received $15,000 pesos from the bank. While no

financial details are available as to his personal financial involvement, it appears that Alamán received stock in this newly formed company. Potash states that

> . . . Alamán and his board members took a very active part in its formation . . . Alamán was personally familiarized with the people and conditions in the city of Celaya . . . it was there, five years earlier, that Alamán had unsuccessfully attempted to establish a cotton textile factory of his own, and now, from his official position, it was possible to help the economy of the city with which he had material and sentimental alliance. In consequence, even though the first foreign textile machinery was marked for the Compania de Tlalpam, the second was assigned to Celaya.[26]

On the other hand, even if Alamán did not have a personal financial interest in this company, the fact that his Trojes project was directly related to the success of Celaya's industrial hopes gave him something less than an objective interest. In either case, when the original Celaya project collapsed in 1836, Alamán was given some stock consideration in another new factory that the city was planning.[27]

The majority of Alamán's important industrial efforts became dependent upon the Bank de Avio project. The bank not only symbolizes Alamán's shift in economic thought towards mercantilism, but also the epitome of don Lucas' successful efforts to force the industrial revolution onto his nation. Without it, Mexico's industrial revolution would have been postponed indefinitely.

CHAPTER V

THE TEXTILE INDUSTRY

Alamán's textile interest dates from his visit to England in the 1810 period. He was always interested in modernizing this economic avenue along English models. His success in this field depended in large measure on the Bank de Avio and without government intervention his achievements would have been impossible. After resigning his political office in 1832, Alamán devoted a considerable amount of time and money to further improvements on his Trojes project. Short of capital, he mortgaged his house in Mexico City to the Church for $15,000 pesos.[1] In 1834, having absolved himself of political crimes' charges, especially the death of Guerrero in 1831, he emerged from hiding and returned to the Celaya area where he continued to supervise work and to improvise other industrial projects. According to Valades it was at this time that he developed his scheme for the monstrous cotton complex in Orizaba in partnership with the French firm of Legrand Brothers, which ultimately came to life in 1837 under the now legendary name of Cocolapam. But before this reached maturity Alamán once again, in June of 1835, found himself attempting to draw on funds from the Bank de Avio. This time the bank granted don Lucas two loans

totaling $32,000 pesos, $20,000 to be used for a paper factory which he proposed and the remainder to complete the original Celaya enterprise.[2] The bank was happy to comply with its ex-president's requests. Because of the extremely dire financial straits in which the government found itself due to the Texas revolutionary war, the money never reached Alamán. The bank's tariff source of funds was "temporarily suspended." Don Lucas and others were left to their own wits concerning how to complete projects already started.[3]

By the first of 1836 it was officially declared that the original Celaya project was dead. Celaya city officials notified Alamán of their intention to build a new factory under conditions mentioned previously, and Alamán turned his attentions to the Cocolopam project.[4] A long but worthwhile passage from Potash reveals a great deal about the nature of this project, the character of Alamán, and his apparently undying optimism. Referring to early 1836, Potash states that

> . . . the board of the bank received a proposition from its ex-president (Alamán), who still hadn't received the $32,000 pesos authorized in 1835 for a paper factory and the now dead original Celaya project. He had interested himself in a plan to install a great yarn factory in Cocolopam, near Orizaba. Two French merchants, the Legrand brothers, wanted to invest in it but only if Alamán came in as a partner and with $50,000 pesos. Alamán, knowing full well that the bank was broke and that they had been limited *to $15,000 pesos monthly on duties at Veracruz (towards reaching their authorized* capitalization of $1,000,000 pesos) and that

> they were forced to discount these monthly pledges at ridiculously low percentages to stay alive as an institution, made the board an appealing proposition.

Here Potash goes into a lengthy description of his proposal which primarily involved rerouting much of the incoming merchandise from Veracruz to the port of Alvarado slightly south, and working through an elaborate consignment scheme involving the Legrand brothers that would have allowed the bank to realize almost the full amount of its monthly allotment without steep discounting necessary under conditions at Veracruz. The deal sounded so good to the board that the bank and Alamán conspired so that $90,000 pesos was authorized him, $60,000 to allow him to net out at his required $50,000 pesos after "normal" discounting, and an additional $30,000 to give the bank operating funds. Returning to Potash's account,

> . . . to persuade the board to grant the loan Alamán painted a brilliant account of the contribution to the Mexican economy this loan would make, Cocolopam would increase the national production of coarse cotton thread and would stimulate raw cotton cultivation, and that he personally would dedicate his profits from this factory to amplify the Celaya (new Celaya project, after collapse of wool project in 1836) enterprise, in order that its weaving would consume the thread of Cocolopam; and, finally, when that was in production, part of its income would be invested to found a paper factory. Meanwhile, from the beginning, a part of the profits of Cocolopam would apply themselves to debt reduction, likewise for the other projects. Thus, the bank will recover its funds that have been unproductive for so long, and three new enterprises would be scattered beneficially in diverse parts of the country.[5]

We do not know whether the oratory convinced the board, or whether it was Alamán's stature or promise to route funds for the near-defunct bank that swung the deal, but on the day after receiving this letter the loan was approved. The next day Alamán entered into a legal contract with the Legrand brothers. Needless to say, customs' authorities got wind of what was taking place and in the hectic process of the ensuing bank draft confusion the bank failed to get its money. But Alamán, not through deliberate design but through mechanical and impersonal circumstances, came through with his $50,000 pesos.[6]

On March 3, 1837, the cornerstone of Cocolopam was laid. A little more than a year later the factory was in production, thus starting a local tradition that found Orizaba developing into a first rank textile industrial center by the 1960's.[7] But by the early 1840's, after jointly investing more than $300,000 pesos in the operation, Cocolopam went into receivership. After the Legrands had given up, Alamán openly faced a surly group of creditors with his honor as practically his sole source of collateral.[8]

Much remains unknown about the operation of Cocolopam because of lack of proper accounting methods and record keeping. But based on the situation of the textile industry in Mexico at that particular time it is possible to reconstruct most of the problems confronting Cocolopam.

Before the creation of the Bank de Avio, Mexico had no textile industry, at least not in the modern sense of the phrase. On the other hand, almost every house in the country was a textile workshop; weaving being a home occupation cutting across most class lines, but primarily traditional with Indians. By the end of the colonial period artisan shops and guild organizations were well regulated by law, and well defined textile centers were to be found in several areas of New Spain;[9] Puebla dominating cotton fabrication and Queretaro woolens.[10]

The effect of Charles III's free trade reforms of 1778 and of Napoleon's campaigns in Spain were to encourage textile amd raw material growth in New Spain. But the industry remained completely artisan in form and Mexico was still largely dependent on Spanish imports. In 1804 Spain, unable to supply the new world, authorized the neutral United States to enter Mexico as a supplier of material goods, as well as Asian sources from the Pacific coast. The result was that the local artisan textile industry, flooded by high quality and low cost foreign goods, became seriously threatened. Property damage caused by destructive military operations during the independence movement, and the flight of Spanish capital, almost completely destroyed the industry. After favorable English trade concessions following early recognition of Mexican independence, matters grew worse.[11]

Throughout the 1820's, with one brief and insignificant interlude in 1829, local artisan textile interests were further hurt by the government's adoption of an essentially non-protective tariff in line with laissez-faire thought, especially during the Victoria regime. Government was dedicated to no direct economic intervention and restricted its activities to such indirect aids as road building. A lively economic debate ensued during this period over the tariff issue pitting laissez-faire liberals against protectionist conservatives. Protectionists during the 1820's were primarily concerned with sheltering the older artisan industry and not particularly interested in fostering modern industrial growth.[12] In fact, for various social and other reasons, a great number of conservatives and political liberals were opposed to modernization.

The brief life of the protective tariff of 1829 was of this unprogressive nature, designed to defend old artisan industries. Excepting the juggling and confusion of the next few years, it can be said that until the middle of the 1830's tariffs were of a non-protective nature and in a laissez-faire spirit, designed to produce sorely needed government revenues. It was from just such a tariff that the Bank de Avio was created. Throughout the early national period artisan textile interests were almost solidly pro-protectionism, and the tariff issue remained a lively and divisive one.[13]

Not all foreign textile imports presented a competitive threat to local artisan interests, but usually only high volume low-cost clothing for the working masses, of which English and American goods were vastly superior to and cheaper than local products. Bullock, traveling through Mexico in 1821, noted that it was impossible for English textiles to compete with expensive artisan products such as gold and silver trimmed lace. But this was by its nature geared towards the wealthy few.[14] Bullock also noted that in the short span of his few months' absence from Jalapa English textiles had revolutionized local customs. Spanish women, traditionally clothed in black, now, inspired by the arrival of a chic English female and Ackermann's fashion manual, were to be seen dressed in all the latest prints, colors, and styles. In either case, the Bank de Avio, for what it represented, was hotly attacked by these vested interests, and the industry it spawned remained so throughout the lifetime of Alamán.[15]

In the middle of the 1830's, with modern factories just beginning to start production, the tariff, because of Alamán and other strong textile and industrial interests, took on a marked protectionist tone. It remained so at least until Alamán's death in 1853.[16] In spite of opposition from economic liberals, artisan groups, from quarters defending the old way of life, or from others bemoaning loss of government tariff revenue, the tariff remained firmly

protectionist in favor of budding modern entrepreneurs. And sometimes this opposition could be extremely strong, as in 1829 when the Godoy Proposal (another package plan for textile industry modernization) was soundly defeated by Puebla led artisan textile interests. The Puebla artisan industry at that time was very well developed, containing some 6,000 looms that gave employment to 30,000 people, including cotton cleaners (unseeded cotton was shipped to be cleaned at usage point), apprentices, and scores of other employees. Godoy, a highly esteemed and influential ex-member of the supreme court, was accused of being involved in an English plot designed to extract wealth from the country, of attempting to undermine the economy of Puebla, and among other things, of attempting to foster repugnant social change that modernization would bring.[17]

Nevertheless, protectionist forces, inspired and led by Alamán and his voluminous writings and by men such as Antuana and his La Constancia interest, were to prevail.[18] When La Constancia opened for business in 1836 a new wave of protectionism broke out, and the tariffs of 1837, 1842, 1843, 1845, 1846 all strengthened protectionist views by enumerating prohibited import items.[19] For example, the Tariff of April 7, 1845 added sewing thread, linen and cotton mixtures to the list of prohibited items. And the tariff of 1846, while it reduced duties and temporarily lifted prohibitions on raw cotton imports, was clearly in favor of industrialists and

was pushed through congress in spite of strong agriculturist opposition.[20] In fact, the rising power of the industrialists became so strong that they were almost literally at will to dictate tariff platforms. After organizing nationally in 1842 this power increased.

In 1842, under the vociferous prodding of Alamán and others, the Direction de Industria was formed.[21] Alamán was its first president. In that year the Bank de Avio ceased operations, having been gracefully allowed to die by order of Santa Anna, and to no one's surprise. Created to in some ways take the place of the now defunct Bank de Avio, the Direction de Industria was a national association of industrialists designed to generate strong protectionist influence in defense of rising manufacturing interests, and to exert legislative pressure towards that end. With good national organization on a due's paying basis, the group's influence was soon felt throughout the country. Not that Mexico had become industrialized enough to warrant such a successful organization, far from it, since industrialization was very much in its infancy, but because of its organization and prominence of members and contacts the group was able to exert undue legislative pressure to insure their ends. Laws were passed and pressures were exerted on chieftains in various regions to ensure as free a flow of goods as necessary or possible nationally, with a minimum amount or no internal taxation at all.[22] Pressures were exerted on

central or state governments to keep local military chiefs in line. And contraband, considered the greatest threat to expansionist-minded industrialists and regarded as one major cause of Mexico's financial difficulties, was vigorously and systematically attacked. Extremely strong and constant pressures were exerted by Direction de Industria members to eliminate this source of competition and aggravation.[23]

Contraband was always a cause of financial hardship to the government, but after independence matters grew worse. It is true that it was often "approved" by the government or ruling military chief in power as a sop to local petty chieftains in lieu of the government's inability to meet payroll and other military expenses, but its effect was damaging to the Mexican economy and government in a variety of ways. Bullock, Beaufoy, and other travelers of the 1820's relate of smuggling conducted openly in Vera Cruz, and others of similar stories elsewhere.[23] Gregg, in 1835, tells of the lucrative precious metal contraband trade from northern Mexico into the United States.[24] Chavez Orozco, in treating the period 1820-1853, felt that contraband far and away was the worst enemy of national industrial growth and that the evidence was fitfully abundant.[25] Valades, in agreement with Chavez Orozco, claimed that in the 1849 period 75% of goods displayed at the San Juan fair, the most powerful in all Mexico, was contraband, and the harm to both industry and national finances alarming.[26] Alamán himself, in one of his many newspaper attacks against this condition, during

the early 1840's accused General Mariano Arista of being an offender. He states that the general had been "authorized" by the government to "import" duty-free enormous quantities of English textiles by way of Guaymas and Mazatlan as a political sop, and that this and similar acts were seriously undermining the infant Mexican industrial economy and national welfare.[27]

The hurdles confronting Alamán and his dream of creating at least a modern textile industry in Mexico were enormous, not to mention problems stemming from lack of tradition or local experience or geographical or technological handicaps. But he was undaunted and apprently untiring. He dreamt of a modern Mexico, economically and materially, and was confident in the future of his homeland as a powerful nation. He also felt that Mexico, then and there, was more than able to produce textiles to clothe the masses, efficiently and cheaply, and that in the process a vast raw material agriculture base would be created. He looked forward to the day when raw material imports would no longer be necessary, when ". . . the country would have two powerful sources of riches, one in agriculture and the other in industry."[28]

Alamán felt that in order to accomplish this it was necessary that the state refrain from establishing new and odious taxes on the nascent industry, and that Cocolopam and other factories should be free from all political "contributions." Under his coaxing the political chief of Orizaba

approved the slight monthly tax of twenty-five pesos, but a few months later requested that in lieu of this light impost Alamán should establish a school for the sons of textile workers and raw material producers at company expense. Alamán was delighted at the outcome.[29]

The financial history of Alamán's Cocolopam from its birth in 1837 to bankruptcy in 1841 is still sufficiently vague not to permit positive and permanent judgments concerning his participation. But, as with his other enterprises, enough is known to develop some conclusions. Orizaba, in contrast to Puebla, had neither an industrial textile tradition nor artisan base on which to build, and geographically was further handicapped from a market distribution and raw material supply points of view.[30] Alamán planned and carved out of the wilderness an industrial enterprise completely new to its physical and human environment. He felt that distribution, raw material, and labor disadvantages would be more than offset by the perpetually humid climate of Veracruz conducive to cotton production, and the relatively plentiful hydraulic power available to the region. In fact, while the state of Veracruz produced cotton in support of Cocolopam it was of a superior quality, but sufficient quantities were always lacking.[31]

Raw material supply consistently presented a critical problem to the budding textile industry and Alamán was indefatigable in promoting its cultivation and spread

throughout Mexico, from the old colonial stronghold of Guadalajara to Michoacan, Trojes, Veracruz, and other areas. One of his thoughts was to convert Texas into a cotton territory as an economic link with political significance to safeguard against United States or other expansionist minded nations.[32] Unfortunately for Cocolopam and Alamán, in the area of raw material availability, the cart was put before the horse, and precipitated the crisis of 1841.

Cocolopam faced numerous other starting problems. In 1836 Alamán wrote bitterly to a friend complaining that a great deal of the machinery he had ordered from the United States was being auctioned off there since the Bank de Avio had no funds to complete purchase negotiations. Worse yet, often the machinery that did arrive failed to perfectly fit the task intended. Nor were there sufficient indigenous personnel trained to immediately handle most of this new equipment.[33] Probably the first good news he received in quite some time came in 1837 when he was notified that the machinery for the cloth factory in Celaya had finally arrived and that they were beginning the production of panos that would make Celaya famous in Mexico in the nineteenth century.[34]

Aside from the normal problems one encounters in constructing a factory, from construction itself to labor to equipment to raw material supply and distribution and management concerns, problems of a social and moral nature arose that elicited the active participation of the church.

The Bishop of Puebla, whose jurisdiction included Orizaba, wanted the work shift at Cocolopam modified since workers leaving the factory at midnight on Saturdays frequently endulged in "drunken orgies" on the road from the factory into town. This resulted in great fatigue and drop in Sunday church attendance. Alamán, accommodating as always, complied.[35]

Little is known about specific financial circumstances surrounding Alamán or Cocolopam during 1838-1841, but the raw material shortage crisis of 1841 apparently placed the company in bankruptcy. Figures compiled by Bazant show that, because of a lack of raw material, production of coarse thread dropped from 1,014,004 pounds in 1841 to 777,115 pounds in 1842. Alamán, feeling honor-bound and obligated to fulfill all old contracts and pledges (including interest obligations on government notes in spite of a general moratorium granted by the government), and his full payroll, could not weather the storm.[36] Alamán later blamed "slow business growth and insufficient capital" for Cocolopam's predicament. In 1841 raw material was exhausted, and lacking funds to import additional quantities the looms and spindles of Cocolopam became paralyzed. Production was stored. To make matters worse the Legrand brothers pulled out of the operation completely.[37]

In view of Alamán's subsequent actions one can only wonder if the Legrands should not have pulled out sooner,

because in spite of the apparently hopeless financial and production mess Alamán refused to abandon the project. Instead, he borrowed money wherever he could, paying interest as high as 1½ to 2% monthly. He accepted full responsibility for all past and current company debts, and Cocolopam continued operations alternating between fits of production starts and stops until late 1841. One telling fact relative to Alamán's business mentality and that of Mexican industrial growth was the position he took concerning the unsolicited general government debt and interest payment moratorium at this time. Alamán, with his back to the wall, refused to avail himself of this financial breather, stating that it was a ". . . remedy, even though legal, that was incompatible with honor and with his word given on all contracts."[38] He and others of his kind would have to learn that the vagaries and wide variances in standards of personal honor would have to give-way to impersonal warranty business codes with planned, predictable, and accountable features, and that personal liability had no significant place in the modern corporative venture.

In mid 1841 with the last efforts to salvage Cocolopam having failed, Alamán, as a last resort, called a meeting of all creditors and explained the cause of payment and work suspension. By this time, as previously noted, total capital investment in Cocolopam had reached $300,000 pesos--presumably including creditor debt. From an account of the creditors' meeting given in the Semanario de la Industria it was

reported that Alamán had answered all questions put to him by the creditors satisfactorily. It was therefore decided to keep the factory in operation under the receivership of three men, one of whom was Alamán, the others creditor nominees. It was further revealed that Alamán had placed "all" his earthly goods at the disposal of the creditors as a gesture of good faith. The new owners, esteeming the services and honor of Alamán, not only refused to take these personal goods, but also gave Alamán a percentage (presumably small) of company stock under the new arrangement.[39]

How much of the total estimated investment of $300,000 came directly from Alamán is unknown. Nor is his percentage of stock in the reorganized company known, nor its net worth then. But Valades tells us that the bankruptcy negotiations forced Alamán to give up all his stock interest in the reorganized Celaya operations and to place new mortgages, presumably second mortgages, on Trojes and Juan Martin.[40]

After his brief period in hiding for political reasons, Alamán in January of 1842, resigned his position as head of the Junta de Foment Nacional Industria, and returned to Cocolopam in very broken health. Now fifty years old, poor health was to accompany him to his death in 1853.[41] With the plant still shut down primarily from a lack of raw material, Alamán left Cocolopam and returned to his beloved Trojes, but in November of that year President Bravo called on his services. Alamán then formed plans for the Direction General of National Industry which came into being after the

collapse of the Bank de Avio earlier in the year. His organized struggle for protectionist tariffs has been discussed earlier, and from this point on to his death his active financial or management participation in business affairs waned, Alamán confining himself in large measure to writing his great History of Mexico between further periods of public service.[42]

Cocolopam presumably struggled on until Alamán's death, and raw material supplies remained, among other factors, a serious problem. In 1844 of Cocolopam's 11,500 spindles only 6,294 were in operation, and the growth of coarse thread operations continued to reflect erratic conditions as compared to the relatively smooth finished product production largely from Puebla. While coarse thread production fell from slightly over 1,000,000 lbs in 1841 to 777,115 lbs in 1842, in 1843 it soared wildly to 8,380,000 lbs, then to 12,944,571 lbs in 1844. Previous to this the 1,000,000 lbs figure had been the greatest production ever attained. In 1845 production fell to slightly under 3,000,000 lbs, and in 1853 it was 7,274,799, by rising demand. On the other hand, finished pieces of <u>manta</u> from Puebla during this same period reflect a steady and healthy growth in output from the modern La Constancia; from approximately 195,000 pieces in 1841 to 217,000 in 1842, 414,000 in 1843, 507,000 in 1844, 656,000 in 1845 and 875,000 pieces in 1853.[43]

Puebla continued to dominate the Mexican textile industry, now evolving along modern lines, and towards the end of the nineteenth century was still the greatest single production center of finished mantas. Its closest rival was the Federal District whose production amounted to less than fifty per cent than that of Puebla's.[44] The Vera Cruz area, on the other hand, had become a prime textile center where none had existed before Alamán and his Cocolopam.[45] There are various figures and statistical combinations to reflect this development, and this growth and new economic Orizaba textile base continued after cotton production was virtually eliminated from the state of Vera Cruz. In the immediate period of the 1840's Potash, using both output and location figures, ranks the Veracruz area as third in the nation, behind only Puebla and Mexico City.[46]

By 1849 Alamán had "reached the sunset of his personal fortune," having by then sold his beloved Trojes. Valades does not indicate exactly when he sold it, but from a sale price of $70,000 pesos Lucas netted only $29,000, after first paying $12,000 to his son Gil under the terms of his mother-in-law's will, then clearing mortgages on two houses he still owned. His wife's possessions had dwindled and the statesman's only remaining fortune consisted of two houses in Mexico City.[47] Presumably Valades meant to add the cash he netted, plus stock interests still held in Cocolopam and whatever mining and other interests he may

still have retained. In either case, shortly after having been called back to public office in 1853 by Santa Anna, who was now at the peak of his conservative political career, Alamán died. At that time he was 61 years old, and the recent founder of a new and formidable conservative political party. Presumably Mexicans have forgiven him for the former, but his political attitudes in addition to his alleged complicity in the death of Guerrero in 1831 are points for which Mexican "liberals" have apparently never forgiven him.

CHAPTER VI

SOME CONCLUSIONS AND SOME QUESTIONS

Alamán, strictly speaking, was undoubtedly one of the all-time great business failures both in terms of management abilities and personal financial success. To a modern Wall, La Salle, or Market street investment firm he would have epitomized the zenith of fiscal irresponsibility. But in his own time this was more the rule than exception. Perhaps the kindest statement one can make is that throughout his business career he greatly overextended himself from a capital resources and time availability points of view, and that the end result because of this and accompanying factors was financial ruin. To Valades ". . . all his (Alamán) outlooks were enormous," so much so that they were unrealistic and hopeless. And Valades was a highly pro-Alamán commentator.[1] No one contradicts Valades, and most critics go beyond this. Alamán conducted himself like a hunted fox. He was everywhere, in body or spirit, flitting from region to region, project to project, the "mad-entrepreneur," apparently unresponsive to logic or good business methods.

His record is replete with unsound business practices. While little is known about Alamán's detailed mining activity while managing United, it is known that until "fired" in 1829, United, under Alamán's management, had extensive works under way throughout Mexico. They were thinly scattered capital-wise, resulting in terrific inefficiency and loss. Where other foreign mining competitors were more or less concentrated effort-wise within specific areas and usually to specific mines, United had many projects underway simultaneously, all unprofitable. Even Ward, who while cautioning British investment was nevertheless optimistic about Mexican mining, was shrewd enough to have specific reservations about United under Alamán. He was a little dubious about United and Alamán because of " . . . their far-flung and gigantic scope of holdings and operations," from Oaxaca to Chihuahua, he clearly implies there were sounder and safer mining investment opportunities on the scene.[2]

Celaya and Trojes is another case in point. From its beginning it followed the general pattern of grandiose scale and inefficiency. When Alamán pitched Celaya notables on his textile project in 1825 they were extremely enthusiastic. The clergy was so enthusiastic they offered to give him a monastery building for the purpose.[3] But Alamán did not want a medium sized operation, so he sold his home in Guanajuato and proceeded to build a brand new colossal edifice, a costly one that never was used. And he built it

long before he had contracted for machinery or could reasonably estimate its arrival, productive capacity, marketing potential within Mexico and a hundred other complex "details" that help ensure successful business ventures.

Trojes was no better. Alamán plunged headlong into a hundred different products, animal and vegetable, hoping to make Mexico entirely free from dependence on foreign imports, regardless of their nature. Instead of concentrating his limited time and capital on related textile products in meaningful and coordinated support of his Celaya enterprise, then broadening his product-lines gradually toward a more balanced Mexican agriculture with good related industrial processing and marketing potential, Alamán wasted away both on untold sowings that could never have any real economic significance for Mexico. It was more of an horticultural paradise. Later in life even Alamán admitted that Trojes was the cause of all his subsequent financial difficulties. But at that time he was still young, healthy, and full of optimism, so much so that after the complete collapse of the original Celaya project in 1836 he was still able to write to the Bishop of Puebla that he was now going to Trojes ". . . to see about planting many new (foreign) seeds that had never before been grown in Mexico . . ."[4]

Alamán's enthusiasm and optimism was apparently contagious, for in spite of their ultimate failure or heavy losses under his guidance, he always seemed able to scrape together more money and investors for new projects. But his mother-in-law was apparently a better judge of Alamán's business acumen than his numerous associates. When she did in 1841 her will, aside from absolving Lucas from more than $20,000 pesos personally owed her, requested that Alamán only repay a total of $12,000 to her grandson Gil (son of Alamán) and that " . . . this money was to be invested and compounded in the most secure manner for his benefit until he is old enough to manage it himself."[5]

There are other examples of Alamán's business inefficiency. In 1842 there sat rotting and rusting in a warehouse in Mexico City machinery for producing paper that, including expensive transportation charges, had cost the Bank de Avio some $60,000 pesos. The equipment for the paper factory had originally been assigned to Alamán. It was subsequently returned to the bank, and now sat, much ruined by rust and mildew, hopefully awaiting salvage.[6]

Cocolopam, Alamán's last and in some ways greatest project, offers a great deal of evidence supporting business inefficiency. The irony and paradoxical situations here strongly indicate that overcapitalization, along with inefficiency, ultimately led to bankruptcy in 1841.

Today when a man decides to enter a local and limited manufacturing venture he is confronted with numerous capital and coordinating problems. These include plant construction or rental requirements, raw material or component availability, direct and indirect labor, amortizable expenses such as tooling and allowable depreciation, and a whole host of related operational expenses usually lumped together under a category of general overhead involving such items as management, sales, production control, accounting, engineering and development, purchasing, and dozens of other organizational components; not to mention competitive pressures and tax structures within which one must work. Finally, and hopefully, an end product with good price and quality marketability will skillfully and scientifically be arrived at; a product whose price anticipates as accurately as possible all capital risk factors and provides sinking funds for capital replacement and expansion.

In one sense, when a firm broadens its distribution scope from a local to an area to a regional to a national level, it increases its potential sales, profit, and capitalization requirements while simultaneously increasing its capital risk. Efficient geographical marketing including transportation aspects are critical phases of this expansion, and in this modern age of instant communications and data processing, can often make the difference between profit and bankruptcy. The end result may or may not have any

direct relationship to productivity levels, although today it usually is <u>the</u> critical factor.

In either case, an expanding firm encounters a spectrum of prerequisites, most pressing being increased capital needs, broader marketing coverage and time to first learn, then learn to anticipate (and/or create) regional consumer variants in product tastes or necessities conditioned by traditional preferences dictated by geographical considerations such as climate, or other factors. A modern advertising man would elaborate endlessly on this subject, but the important point here is that expansionism must always begin from a base beneath the level striven for. Businesses grow from small enterprises into larger ones, governed by these and other still broader considerations.

Cocolopam from its conception, as most other Alamán projects, defied these normal business considerations and growth patterns by being initially designed to accommodate any and all national requirements. In the modern age, aside from capitalization requirements that would make such attempts extremely costly, risky, and rare, this would be an unthinkable approach. Even within gigantic corporations involved in product diversification, where money considerations need not be a problem on new product introduction, the pattern is to introduce same on a field trial basis, starting in a selected town, city, county or region. Then,

if favorably accepted, expanding into other regions until it becomes a national, or indeed in this age, a global product. But Cocolopam, handicapped by its very newness from a sociologically acceptable point of view, by the terrific political instability and economic depression, by formidable geographic impediments to regional much less national product distribution, by the then very low level of communications' technology, by a total lack of modern large scale capitalistic tradition and accompanying institutional growth, and a score or similar considerations, attempted to do what a 1960 age corporation would still avoid.

Cocolopam was newly built in Orizaba. An enormous amount of machinery was installed, usually at great added and wasteful expense. Capital often took on a highly unproductive nature, consumed by human and physical non-productive inventories. Workers were hired and paid salaries while sitting idly in anticipation of production starts. Vast bales of cotton was purchased and stockpiled, while an attempt to create a booming cotton industry in the state of Veracruz was undertaken. After filling the plant with workers and raw cotton, yarn was spun at an enormous rate. And this was done without benefit of sound market distribution or any real hope of effectively establishing same, or of immediately favorable economic, or political conditions in which to grow. Efficient management and planning to co-ordinate the complex

production and marketing phases was apparently totally lacking. Cocolopam's hydraulic powered looms and spindles digested raw cotton and regurgitated it at an enormous clip, and soon finished yard was piled "sky-high." Raw material dwindled rapidly, then dried up completely. Frequent work stoppages occurred but workers were paid regardless, and unmarketable production was left to sit.[7]

The inevitable happened. Cocolopam, as earlier noted and under its original ownership and management, collapsed. Even the faithful Valades, in attempting to smooth-over Alamán's participation in this fiasco of inefficiency, had to admit that the ". . . partners forgot that much capital was needed to pay out salaries and other expenses while the business was getting started."[8]

Jan Bazant, in a very fine recent study of Cocolopam's operations under Alamán, reaches several guarded conclusions. While admitting the lack of much necessary information and that several of his conclusions are derived by questionable hypothesized routes, Bazant cannot help but conclude that Cocolopam was, in many ways, a monster, and that much of its capital equipment was unnecessary. Its planning was poor or non-existent. It was hampered by terrific waste. It was too big. Bazant even claims to prove that the factory was internally imbalanced equipment-wise, so much so that it would have prevented

them from running efficiently or effectively even if a market had been available. Finally, Bazant laments the costly, wasteful, and unnecessary complete reliance on foreign technology, especially in terms of hydraulic power. He feels his figures clearly prove that a blend of mule power and in rare cases steam would have been equally or more effective. In fact, to Bazant, on many textile products, the Mexican mule-powered methods were (from a productivity point of view) more efficient than English powered looms, suggesting that a balance between both would certainly have been preferred.[9]

In a gross understatement Bazant concludes that " . . . it appears that Alamán didn't give sufficient attention to his enterprise," then goes on to say that the difference between Alamán and the successful textile entrepreneur Antunano is the ". . . eternal difference between a theoretical and practical man . . .," and that the projects of Alamán, the theorist, were too large and directly caused the calamity of 1841.[10]

That Alamán failed dismally as an entrepreneur from a management point of view seems clear from the fragmentary evidence available including his capital investment record. Bearing in mind that this record is highly incomplete, and in some areas completely subjective as to cost allotments, it nevertheless appears to substantiate this conclusion. During his lifetime Alamán invested a known capital of at

least $287,000 into his enterprises, including United Mining, Celaya, Trojes and Cocolopam, as against a known return of $70,000 pesos received for the sale of Trojes and a stock consideration (presumably small but of an unknown capital value) for the reorganized Cocolopam.[11] This stock consideration is the only unknown value of investment return, while the investment side is replete with numerous mortgages and other loans which, while of an undetermined value, can be inferred to have added great capital sums. The total capital invested at Trojes, worked in vain for more than twenty years and finally sold at great loss, remains uncomputable. And Celaya presents similar accounting problems. On the surface it appears that aside from the greater part of his life, Alamán lost well over $200,000 pesos on his enterprises. The true figure is undoubtedly much greater. In either event, it seems clear that Alamán's management deficiencies were more than matched by his financial losses.

Because of Alamán's lifelong political involvement the difficult question of whether or not he used his public trust either to enrich himself or to attempt to do so becomes of prime importance in attempting to come to some final conclusions concerning his ethical conduct. Because of frequently overlapping private and public interests, especially capital and legislation control influence, a strict separation is impossible to achieve.

For example, Alamán frequently pushed for public laws that had a directly beneficial bearing on his own enterprises, or could have. But he did so openly and under conditions he felt to be beneficial to the economy in general and the nation at large.

From the tentative record of financial investment versus return it can be inferred that in fact Alamán did not prosper financially from his public trusts. But whether or not his primary motive in governmental activity that touched on economics was personal enrichment, then national welfare, is a moot question. From his record of activities it seems that he was totally oblivious concerning personal enrichment, and that he was piloting a personal scheme to pauperize his family and friends.

But, as any normal individual, he was always very much concerned about his own financial welfare. He freely admits this time and again, and this should not surprise us. He also freely admits to using public office to help his own ends. In a letter to the Hullets in 1824, after being called back into political office, Alamán told them not to have fears concerning their endeavors to raise money in England for mining since ". . . in government office I will be able to help our own enterprise."[12] And this he did, by influencing legislation favorable to foreign investment. But he primarily did so to improve mining on a national level and did not seek legislation of a secretive or

singular and personal nature. His official relationship to the Bank de Avio and government stature certainly raises questions of ethics concerning loans received, either personally or by his friends, but these loans were an open-book and apparently had the national welfare as a prime motive. The loans were well publicized. Even if at times skullduggery was employed to receive authorized funds, the loans were well known. At best, it seems Alamán may only be accused of slovenliness, favoritism, and gross inefficiency in handling public funds. This surely would be in keeping with his own business nature and with the times in general, but unethical and profiteering conduct appear not to have formed a part of his character. He never hid his dual interests. In fact, he consistently displayed them, hoping thereby to create a new and great modern Mexican economy by way of personal example.

Aside from apparent financial ruin, other evidence speaks highly of Alamán's personal integrity and moral character. He was an extremely religious man. At nineteen he received the habit of the third order of Penitence of San Francisco, whose rules of social conduct were extremely strict, and he remained devout throughout his life.[13] His entire family, having suffered great personal losses in 1810, continued through life without apparently bettering their financial situation.[14] There is other evidence, such as his refusal to accept salaries for public office and his honorable conduct at Cocolopam's

bankruptcy proceedings in 1841, but perhaps the most telling evidence is his involvement in the Butler affair.

In 1836 Anthony Butler, the ex-United States minister to Mexico and a personal friend of Alamán, proposed a gigantic get-rich-quick land scheme to don Lucas. Butler and his friends would put up all the cash needed to purchase a vast tract of land in the northern frontier territory of Mexico at dirt-cheap prices, then sell at a tremendous profit--after Alamán had used his influence to guarantee that Mexican laws would react favorably to foreign settlement in this area. Alamán turned the offer down.[15] And it should be pointed out that at that particular time he was struggling with his Cocolopam project and very much in need of funds. It seems clear that while Alamán was a poor businessman, strictly speaking, and may be accused of inefficiency in handling public funds, he at the same time conducted himself on the highest ethical level--honor often exceeding its role and conflicting with sound business procedures.

Aside from financial, efficiency, and ethical viewpoints, Alamán's activities should be considered in light of long-term significance to Mexican economic national growth. No one denies him the honor of fathering Mexico's industrial revolution in the course of his meteoric business career. Irony, indeed, that he should be awarded this honor, but just. For while his personal

fortunes suffered, many of the manufacturing and credit institutions promoted and forced into creation by Alamán blossomed into incipient bases of what later developed many phases of modern industrial Mexico, including his own Cocolopam project.

To Bazant and others, Alamán revolutionized the cotton industry, creating a base for Mexico's industrialization; directly by his personal manufacturing ventures and indirectly via the Bank de Avio.[16] Lobato broadens Alamán's contribution as a result of the bank which created ". . . yarn and cotton factories in Mexico, Puebla, Cuencame, Tlaxcala, Celaya, Parral and Chihuahua; woolen factories in Queretaro and Cuencame; silk in Leon de Los Aldamas and Tlalnepantla; ginning factories in San Andres Tuxtla; paper in San Miguel Allende . . ." and others. While Lobato does not overemphasize their immediate effect on the Mexican economy, he points out that ". . . while most of these enterprises were of modest character, nevertheless, it is well to remember that several afterwards reached great importance, having their origins in the bank."[17] And Chavez Orozco extends the list to include incipient iron enterprises.[18]

Aside from the precedent and significance of the bank itself, Silva Herzog attributes to Alamán the honor of effectively establishing the vital philosophy and position that national mineral resources of sub-soil and reserve natures belonging to the state as a trust for the welfare

of all its inhabitants, with its major significance for the Consitution of 1917 and oil-expropriation under Cardenas in the 1930's.[19] The list of praise is endless. It is also to Alamán that one may directly trace the beginnings of the breakdown and challenge to the long and traditional highland dominance of the central valley of Mexico in favor of coastal and northern regions, and its ultimate economic and political significance in the twentieth century.

However, because of his conservative political views, much of his deserved praise has been of a tongue-in-cheek nature, highly reserved or qualified, and tempered accordingly by Mexico's liberal political historical development. And this same historical development, especially after 1910, has tended to cloud, ignore, or rationalize his truly remarkable achievements. When one objectively considers obstacles he had to surmount, not the least of which was a long list of personal enemies, his stature necessarily rises.

Alamán died an avowed monarchist. He was a right wing conservative in his own age, and his political enemies, mostly liberals, never forgave him, especially for Guerreros execution in 1831. He was forced into hiding several times. In the 1840's liberals even resorted to vituperation and smear campaigns concerning his Bank de Avio dealings.[20] Artisans and agriculturalists constantly fought him over the tariff question. So did laissez-faire economists and politicians supporting these views on economic growth.

Foreign pressure was constantly applied to make his modern textile and other manufacturing projects as difficult as possible. Local petty chieftains vigorously opposed his anti-contraband policies, and all who disagreed with his centralist political views of stable institutionalized government, for whatever reasons, attacked him. And, as if this was not enough, geography, technology levels, and tradition conspired against him.

Even the times conspired against him in a most direct manner. For example, the civil war started by Santa Anna in January of 1832, besides forcing Alamán into hiding, found duties at Veracruz again confiscated. Bank de Avio funds and manufacturing equipment were detained in the port, creating great confusion and hardship. The Texas revolution in 1835 created another financial dreg on the national budget, finding the banks and Alamán's funds again suspended.[21] The fiasco of copper money circulating at less than intrinsic value is another example. Heavily discounted, this issue amplified an already broad distrust of government, and by circulating primarily among the working classes undermined the purchasing power of the very class mass production was pointed at.[22] From 1810-1853 there is no end to examples manifesting economic and political chaos, and under these circumstances no real stable economic growth was possible.

Alamán had other enemies. As an entrepreneur, strictly speaking and aside from prior reasoning, he was

his own worst enemy. A great statesman, historian, amateur naturalist and scientist, and patron of the arts, the demands on his time were enormous. Unfortunately, he was too often involved in several ventures simultaneously, to the detriment of individual business enterprises. His political posts, from sanitation bureau chief of Mexico City in 1820 to Home and Foreign Minister, are too lengthy to enumerate, but at no time during his adult life was he completely free from political time demands.[23] Potash states that his influence during Bustamantes government was so strong ". . . that you could be sure that whatever came out of Bustamantes mouth had been placed there by Alamán."[24] In July of 1826 he received the appointment of what amounted to executor for the heirs to the estate of Cortes, long absented from Mexico and residing in Italy. Although this position was an important source of income for him and his family (and one which undoubtedly fortified his conservative political views), it created another serious drain on his time. In supervising sugar and other plantings on the Duke de Monteoleone's extensive haciendas, rent collections in Mexico City and numerous other tasks, Alamán was frequently out of touch with his own budding enterprises at a time when close personal supervision was essential.[25]

And yet, in spite of these endless obstacles and personal shortcomings, Alamán accomplished a great deal. It is true that, on one level of thought, his aspirations

were too lofty. He literally tried to link in a day two worlds long separated. He tried to pattern Mexico after the rational, scientific, and whirring industrial revolution he so admired. He tried to carry home from abroad looms, spindles, ginning, sewing and other machines, and immediately stitch onto Mexico that economic pattern he so admired. He also tried to establish overnight a maze of educational and other institutions designed to support this new economic activity and other fields of enlightened public welfare or service. And he tried to accomplish this with a comparatively backward and religiously exclusive economy; apparently without concern for the differences in historical development between these two worlds, nor awareness of the dynamics of social and political change then underway in Europe because of the industrial revolution nor of its potential significance to Mexican social patterns.

Whether he realized it or not, Alamán attempted something no one man or single generation could ever hope to accomplish, and he gambled against impossible odds. From our vantage point, it seems clear that he could only fight a losing battle. The marvel is that he did fight, and that he was able to make any progress at all. This is the truly remarkable fact about Alamán, along with his endless drive and optimism. An early and adamant nationalist, his deep love for and identification with Mexico apparently transcended even his own financial welfare; and this is

more than many of that or later eras can claim. In one sense he displayed entrepreneurial "madness," it is true, for his schemes were enormous, sometimes wildly so. Yet this "madness" was accompanied by a touch of genius. His visions were sufficiently broad, enlightened, and progressive to merit national greatness, and were matched by his apparently predominantly unselfish actions. This surely warrants his high place in Mexican history as one key element on their evolutionary road from a colonial to modern self-propelling economy.

Mexico at birth had great need of an Alamán, for his economic ventures and dreams represented one stabilizing element with national cohesive overtones and significance in an age of near national disintegration. In another sense he lived far ahead of his age, for his progressive views on economics ultimately outdistanced those of his laissez-faire contemporaries. Much of his initial work and plantings would have to wait for the age of Diaz and the cientificoes to reach partial fruition, and the 1950's to witness in large measure the reality of his dream of a vibrant, healthy, modern Mexican economy of a predominantly self-propelling nature, generating its own internal stimuli for continued expansion and growth rather than the mercantilist-oriented or external stimuli that Mexico for so long depended on. The Mexican economy of the 1950's largely achieved Alamán's life-long dream, and it is fitting that

he would have felt completely at home in its mammoth corporativeness and planning.

Perhaps the time is drawing close when it will be possible to cut through the fog of political bitterness that still clings to Alamán historically, and to reach some final and objective conclusions concerning his proper stature in Mexican history. Rather than an objective treatment of overall past performance the tendency still seems to favor arguments designed to compartmentalize his thoughts or related rationalizations to undermine his begrudged stature.

Men like Chavez Orozco, Lobato, Potash and others, while damply praising his activity and its significance to Mexican industrial growth, condemn him for various reasons. Chavez Orozco does so for ". . . his contradictory and paradoxical" views, for failing to push for church property confiscation and redistribution as the only possible way to solve Mexico's economic nightmare.[26] Lobato, agreeing with Chavez Orozco, blasts Alamán for being ignorant of his own ". . . natural contradictions by trying to resolve Mexico's economic problems without dedicating himself to destroying any of the feudal structure of colonial days."[27] Potash ridicules Alamán for ". . . being inconsistent in his economic ideas," pointing out his changing views during 1829-1830 as evidence.[28] Other discussions center on whether or not his progressive and dynamic economic outlook was

mercantilist-oriented, looking backwards, and therefore paradoxical and contradictory because of his political leanings and the ultimate social results of the industrial revolution on Mexico. Hale states that ". . . what confuses the distinctions between liberal and conservative which rely on epitomizing the latter, is the entrepreneurial side of his (Alamán's) career. Alamán was the foremost nineteenth century pioneer of national industry (in Mexico)."[29]

Possibly fixed and unwavering intellectual views on such complex issues is too much to expect to find in any individual over a lifetime, much less of an Alamán pitted against a vortex of anarchy during those first decades of Mexican independence. His flexibility and dynamic economic thought should be tabulated as assets, and perhaps there are more important questions of a vexing nature remaining unanswered. For example, how much of his financial history are we ignorant of? Were his actual losses more, or less, than estimated? What was the capital value of Cocolopam stock received at bankruptcy and reorganization in 1841? How much capitalization can be attributed to Trojes over the years? To Celaya? Can a complete financial statement ever be arrived at covering his activities that will allow a firm net loss accounting?

This vacuum of financial information must be filled, at least in great part, before any final judgment can be rendered about Alamán's true overall contribution to Mexico.

For a final statement on this crucial point should determine whether he truly was as unselfishly dedicated to the national welfare as it appears, or an economic caudillo in disguise. The evidence strongly suggests the former, and if supported by further evidence perhaps then liberals will be able to forgive his political leanings and offer proper homage to one of the great Mexican national figures.

No matter what further research reveals, two things seem assured; one is that the distinction and honor as Mexico's founder of the industrial revolution shall always rightly belong to Alamán, and secondly that, like the echo of a coyote reverberating through the many canyons of Mexico, the spirit of Alamán will always hover overhead smiling down at any prospector in search of wealth.

APPENDIX I

Partial Investment Record of Lucas Alaman

Enterprise	Period	Known Capital Investment (pesos)	Known Investment Return (pesos)
United Mining	1823-29	Cata mine rights UNKNOWN VALUE	
Celaya (t'tiles)	1825	$32,000 (sale of G't'jo h'se)	
"	1832	$15,000 (Bank de Avio loan)	
"	1836	UNKNOWN VALUE	Stock, new Celaya co.
"	1841	Stock, new Celaya co., 1836 (Cocol'm Bnkr'y) UNKNOWN VALUE	
Trojes (agric.)	1826	$55,000	
"	1826	Borr'd heavily from church & father-in-law UNKNOWN VALUE	
"	1828	Mortgages to save prop. after United problems UNKNOWN VALUE	
"	1832	$15,000 (mortgage on house, M/C)	
"	1841	$20,000(m-in-law will reveals)	
"	1841	Mortgage, after Cocolopam bnkr'y, inclds J. Martin hacienda UNKNOWN VALUE	
"	1849		$70,000 (Sale of Trojes)
Cocolopam (t'tiles)	1836	$60,000 (Bank de Avio loan)	
"	1841	* $90,000	Stock, reorg. co. UNKNOWN VALUE
		$287,000.00	$70,000.00

*Bankruptcy revealed total investment of $300,000; assume one-half liability ($150,000) Alaman debt, less $60,000 original capital investment. (Granted, this is highly arbitrary, but seems to be a conservative estimate)

SOURCE: Composite of individual sums listed and footnoted in body of thesis.

APPENDIX II

Produce and Expenditures of *Valenciana mine
from 1788-1810, and 1811-1825

Years	Total Produce	Expenses	Profit
1788	$1,571,216	$ 429,159	$ 1,142,057
1789	1,633,459	448,133	1,185,325
1790	1,499,939	454,523	1,045,415
1791	1,639,085	733,321	905,764
1792	1,049,753	757,173	292,579
1793	1,042,876	738,354	304,521
1794	1,282,042	799,328	482,713
1795	1,696,640	815,817	880,822
1796	1,315,424	832,347	483,077
1797	2,128,439	878,789	1,249,650
1798	1,724,437	890,735	833,701
1799	1,584,393	915,438	668,954
1800	1,480,933	977,314	503,619
1801	1,393,438	991,981	401,456
1802	1,229,631	944,309	285,321
1803	1,232,045	937,931	294,113
1804	1,185,265	941,121	244,144
1805	1,112,756	946,346	167,409
1806	1,040,632	914,662	125,970
1807	1,191,582	1,019,781	171,800
1808	1,523,815	1,205,924	317,891
1809	1,385,611	1,204,333	181,278
1810	869,068	899,521	--
	$31,813,486	$19,676,349	$12,167,589
1811	323,762	122,687	201,074
1812	279,599	144,002	135,596
1813	258,920	238,443	20,477
1814	305,638	215,257	90,381
1815	279,346	235,519	73,826
1816	178,512	149,030	29,482
1817	165,986	136,429	29,557
1818	174,971	142,317	32,653
1819	202,414	180,743	21,671
1820	80,183	63,351	16,832
1821	101,138	72,809	28,329
1822	70,450	60,575	9,875
1823	36,199	32,045	4,153
1824	117,143	87,341	29,802
1825	31,413	11,588	19,824
	$2,605,682	$1,862,143	$743,538

*Valenciana was the greatest single mine shaft on the great Veta Madre at Guanajuato.

SOURCE: Sir Henry George Ward's Mexico in 1827, Vol. 2, pp. 140-141.

APPENDIX III

Record of Mexican Exports/Imports
1825-1856

Years	Exports	Imports	Deficit
1825	$ 9,770,332.37	$17,066,438.61	$ 7,296,066.24
1825-26	17,658,942.29	16,666,463.46	
*1826-27	13,685,964.42	15,703,980.69	2,018,016.27
1827-28	13,667,637.64	15,558,276.42	1,890,638.78
1828-29	14,192,133.61	15,604,719.01	1,412,586.40
1829-30	13,140,737.22	13,624,005.95	483,268.73
1830-31	11,752,346.50	17,438,540.34	5,686,193.84
1831-32	12,000,000.00	20,499,680.66	8,499,680.66
1832-33	14,500,000.00	22,392,607.89	7,892,607.89
1833-34	13,000,000.00	17,000,000.00	4,000,000.00
1834-35	8,724,686.54	12,724,686.54	4,000,000.00
1835-36	7,255,809.34	14,290,744.34	7,034,935.00
1836-37	11,096,099.17	17,381,543.88	6,285,444.71
**1837-38	14,806,092.00	40,733,916.91	25,927,824.91
1838-39	4,431,474.25	20,378,792.91	15,947,318.42
1839-40	4,526,121.81	18,947,675.80	14,421,753.99
1840-41	8,074,100.00	21,836,781.19	13,762,681.19
1841-42	14,650,000.00	19,326,475.27	4,676,475.27
*1843	8,310,484.81	21,129,173.90	12,764,978.87
*1844	7,998,436.16	19,923,819.77	11,925,383.61
1845	10,679,493.93	25,222,304.81	14,542,810.88
1846	10,247,760.50	24,310,030.69	14,062,270.19
*1847	8,820,649.82	26,977,951.11	18,157,301.29
**1848-49	12,105,802.00	24,870,780.87	12,764,978.87
1849-50	7,726,797.76	16,580,520.58	8,853,722.82
*1850-51	8,893,027.22	20,292,130.62	11,309,103.40
1851-52	8,274,927.61	26,012,242.07	17,737,314.46
1852-53	10,044,298.35	16,287,532.85	6,243,234.50
1853-54	15,383,975.00	32,378,046.00	16,994,071.00
1854-55	17,519,128.85	17,519,128.85	
1855-56	12,000,000.00	14,228,324.93	2,228,324.93

* Calculated

** Covers 18 months

SOURCE: Manuel Loza Macias' El Pensamiento Economico y La Constitucion de 1857, p. 30.

APPENDIX IV

Account of the Coinage of the Mint of Mexico* for 30 years, from the year 1796 to the year 1825, both inclusive

Year	Gold dollars	reals	Silver dollars	reals	Total dollars	reals
1796	1,297,794	0 0	24,346,833	0 6	25,644,627	0 6
1797	1,038,856		24,041,182	7	25,080,038	7
1798	999,608		23,004,981	2 3	24,004,589	2 3
1799	957,094		21,096,031	3 3	22,053,125	3 3
1800	787,164		17,898,510	7	18,685,674	7
1801	610,398		15,958,044	1	16,568,442	1
1802	839,122		17,959,477	3 3	18,798,599	3 3
1803	646,050		22,520,856	1 9	23,166,906	1 9
1804	959,030		26,130,971	3	27,090,001	3
1805	1,359,814		25,806,074	3 3	27,165,888	3 3
1806	1,352,348		23,383,672	6	24,736,020	6
1807	1,512,266		20,703,984	7 3	22,216,250	7 3
1808	1,182,516		20,502,433	7 3	21,684,949	7 3
1809	1,464,818		24,708,164	2 6	26,172,982	2 6
1810	1,095,504		17,950,684	3 6	19,046,188	3 6
	$16,102,382		$326,011,903		$342,114,285	

Annual average for above is $22,807,619, to which Ward adds 1,192,381 as uncoined yearly silver amount, to reach a total annual mine production figure of approximately $24,000,000 pesos.

*Until 1810 the only mint in Mexico was located in Mexico City. After 1810 several regions were authorized to mint coinage. Figures for the Mexico mint for the period 1811-1825 are shown in composite listing which charts all known minting activity during this period.

SOURCE: Sir H. Ward's Mexico in 1827, vol. 2, p. 41.

APPENDIX V

Composite of total known coinage in Mexico during 1811-1825, based on Sir H. Ward's compilations covering Mexico, Guadalajara, Durango, Zacatecas, Chihuahua, Guanajuato and Sombrebrete

Mint location and pesos coined, both silver and gold

Year	Mexico	Guadalajara	Durango	Zacatecas	Chihuahua*	Guanajuato
1811	10,041,796		247,439	3,154,902	405,333	
1812	4,409,266		808,792	3,776,971	405,334	
1813	6,133,983		784,240	1,455,000	405,333	311,125
1814	7,520,550	901,949	438,050	800,000		
1815	6,941,263	192,749	336,987	800,000		
1816	9,276,009		314,193	800,000		
1817	8,849,893		139,800	800,000		
1818	11,386,288	212,449	260,830	1,073,281		
1819	12,030,515		244,298	1,026,755		
1820	10,406,154		136,793	764,011		
1821	5,903,526	255,174	209,229	1,326,700		434,090
1822	5,543,254	931,645	608,666	3,610,455		434,090
1823	3,567,821	734,355	818,430	3,965,000		434,094
1824	3,503,880	957,365	753,345	4,093,062		434,090
1825	6,036,878	676,073	816,558	3,213,356		434,090

(Sombrerete** coined 1,561,249 in 1811--only year mint operated. Included in 1811 totals below.)

TOTALS:

Year	Total	Year	Total	Year	Total
1811	$15,410,719	1816	10,390,202	1821	8,128,719
1812	9,400,363	1817	9,789,693	1822	11,128,110
1813	9,089,681	1818	12,932,848	1823	9,519,696
1814	9,660,549	1819	13,301,568	1824	9,741,742
1815	8,270,999	1820	11,306,958	1825	11,176,955

* Suppressed in 1814

** Suppressed in 1811

General Notes: It is impossible to ascertain the individual

(a) mines, or districts, from which the above originated.

(b) Hildalgo's forces created the Guanajuato mint in 1810; Royalist forces controlled same from December 1812-May 1813 when $311,125 struck.

(c) Above figures do not account for money coined by insurgents when in control of certain regions; nor for raw metal that found its way into their hands and eventually out of the country; nor for poor standards at new mints re weight evaluation; nor for large amount of silver plate privately owned (individuals and church) that was melted down and minted, all of which MAKES ACTUAL METAL PRODUCED HARD TO DETERMINE.

SOURCE: Sir H. Ward's Mexico in 1827, vol. 2, pp. 40-45, 165-168.

APPENDIX VI

Some General Statistics on Mexican Economy 1810-1851 Period

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1. MEXICAN FOREIGN DEBT:

1830	$30,103,487	pesos
1832	34,387,750	
1851	51,208,250	(includes mounting interest compounding, primarily Great Britain loans.)

2. MEXICAN INTERNAL DEBT: 1810-1831

   In 1830 amounted to $80,000,000 pesos.
   (Composed of forced loans, etc. govt borrowing from individuals, bonds or otherwise)
   PAID OFF COMPLETELY by Bustamante in early 1830's.
   Covered debts of both political parties from 1810-1830, of which $50,000,000 stemmed from pre 1821 period honored by conservatives and $30,000,000 from 1821-31 period.

3. Terrific high cost of Govt. Mgmt, Burc'ry, and especially HIGH ARMY BUDGET, a serious drain on Mexican budget throughout era.

SOURCE: Manuel Loza Macias' El Pensamiento Economico y La Constitucion de 1857, pp. 1-30.

APPENDIX VII

Mexican Income and Budget 1803

Government Income

Year	Income
1763	$ 5,705,876
1767	6,561,316
1776	12,000,000
1784	19,605,574
1802	20,200,000

Government Income, 1803:

Gross Receipts	$20,075,261	
Net Income	16,645,000	(after admin. expense deducted)

Breakdown of Net Income Sources (admin. expenses deducted)

Source	Amount
Mines, profits on Quicksilver sales, and minting fees	$ 5,500,000
Tobacco Monopoly	4,500,000
Alcabalas (sales tax)	3,000,000
Indian capitation tax (head tax)	1,300,000
Duty on Pulque	800,000
Import/Export duties	500,000
Cruzada, bull sales, etc.	270,000
Post office	250,000
Gunpowder	150,000
Media Anata & Mesada (church contrib.)	100,000
Cards (playing)	120,000
Stamps	80,000
License for Cockpits	45,000
Snow	30,000
Net Income, year 1803	$16,645,000

Mexican Income and Budget 1803

EXPENSES, 1803:

Total Admin. costs, incl'd interior frontiers ..	$10,500,000
Underwriting other colonies; Cuba, Florida, Porto Rico, Philippines, Louisiana, Trinidad & St. Domingo. (All at least partially subsidized)	3,500,000
Remitted to Spain, called the SOBRANTE LIQUIDO REMISIBLE, forwarded annually to treas. in Madrid	6,000,000

Ward estimates same annual budget, roughly, existed to 1810. UP TO 1810 MEXICO WAS FREE FROM ALL PUBLIC DEBTS WHATSOEVER. Because of reforms of Chas. III re free trade w/in Empire, tax revenues generated great increase from 1778 on, plus reduction in quicksilver prices from $84 to 64 pesos per quintal which spurred renewed mining efforts, and the establishment of the tobacco (royal) monopoly in 1764. All three generated an increase in tax revenue as figures indicate.

1810 Period, Civil War: Fiscal dilemma, re loss of Mining duties, plus 1821 (Iturbide) abolishment of tobacco Monopoly (a political sop) results in further financial chaos.

Return to 10% house tax (by Iturbide) falls especially hard on the rich; this tax abolished in 1823.

SOURCE: Sir Henry Ward, Mexico in 1827, vol. 2, pp. 362-378.

APPENDIX VIII

Mexican Budget, 1825

Estimated Income	$10,690,608*	
less	1,317,543	(Goldschmidt loan reduction)
	$ 9,373,065	pesos

EXPENSES

Admin. expense; revenue coll., salaries, etc.	$ 920,235	pesos
Ministry of Interior and Foreign Affairs	105,737	
Ministry of Justice & Ecclesias. Affairs	77,220	
Min. of Navy	2,934,533	
Min. of War	12,000,000	(Army)
Min. of Finance	1,083,143	
Credits against govt. payable in 1825	865,804	
	$17,986,674	
DEFICIT:	$ 7,296,066	
(17,986,674 less 10,690,608) or	8,613,609	
(17,986,674 less 9,373,065)		

*Ward does not break this down departmentally.

SOURCE: Sir H. Ward _Mexico in 1827_, p. 371.

Chapter II

Mining

[1]Lucas Alamán, *Historia de Mejico* (Mexico, 1942), V, 973-976.

[2]Sir Henry George Ward, *Mexico in 1827* (London, 1828), II, 66.

[3]M. D. Comstock, *A History of the Precious Metals* (Hartford, 1849), pp. 209-210.

[4]Jesus Silva Herzog, *El Pensamiento Economico en Mexico* (Mexico, 1947), pp. 12-13.

[5]Ernesto Lobato Lopez, *El Credito en Mexico* (Mexico, 1945), p. 100.

[6]Robert A. Potash, *El Banco de Avio de Mexico El fomento de la industria 1821-1846* (Mexico, 1959), pp. 35-38.

[7]Lobato Lopez, pp. 110-111.

[8]See Appendix III for full listing covering record of Mexican exports/imports 1825-1856.

[9]*Ibid*., pp. 149-150.

[10]Ward, II, 41. Also see Appendix V.

[11]William Bullock, *Six Months Residence and Travels in Mexico* (London, 1825), II, pp. 225-226.

[12]Joel R. Poinsett, *Notes on Mexico, Made in the Autumn of 1822* (London, 1825), pp. 205-220.

[13]Veta grande means mother vein, or lode, of a mining district.

[14]Bullock, II, 100-102.

[15]Capt. G. F. Lyon, Journal of a Residence and Tour in the Republic of Mexico in the Year 1826 (Londin, 1828), I, 305-311.

[16]Comstock, pp. 205-206.

[17]Lyon, pp. 149-151.

[18]Madame Calderon De La Barca, Life in Mexico (London, 1843), p. 140.

[19]Jose C. Valades, Alamán, Estadista e Historiador (Mexico, 1938), p. 40.

[20]Harvey C. Gardiner, editor, Mexico 1825-1828 (Chapel Hill, 1959), pp. 145-146.

[21]Henry Walter Bates, editor, Central America The West Indies and South America (London, 1885), pp. 57-58.

[22]Poinsett, pp. 205-220.

[23]Valades, pp. 7-19.

[24]Ibid., pp. 2-9.

[25]Quicksilver from Spain (usually originating from the famous Almaden mines) was shipped to New Spain, stored in Mexico City (only) and parcelled out to processing haciendas as finished bars were turned in to the Mexico City mint for further processing, while all potential quicksilver mining ventures in New Spain were suppressed or forbidden.

[26]Carl Sartorius, Mexico about 1850 (Stuttgart, 1961), pp. 197-198.

[27]Ibid.

[28]Valades, pp. 19-23.

[29]See Appendix II for figures pertaining to great Valenciana mine during 1788-1825. One must be careful to consider all mining districts and individual mines separately, since there obviously was a great deal of specific mine variation depending on numerous environmental and other circumstances.

[30] *Ibid*., pp. 23-24.

[31] Alamán, IV, 650-651.

[32] Valades, pp. 59-66.

[33] Otto Schoenrich, editor and trans., *The Civil Code of Mexico* (New York, 1950), pp. 1-26.

Bullock, I, 157-158.

Valades, p. 97, pp. 163-164, pp. 181-182, p. 202.

Alamán, V, 410-414, 850-852, 856, 857-858.

[34] Calderon De La Barca, p. 140.

[35] Comstock, pp. 195-196.

[36] *Ibid*., pp. 199-200.

[37] *Ibid*., pp. 209-210.

[38] Bullock, II, pp. 225-226.

[39] Robert C. West, "The Mining Community in Northern New Spain," in *IberoAmericana:30* (Berkeley and Los Angeles, 1954), pp. 1-80.

[40] *Ibid*., p. 18.

[41] *Ibid*., p. 25.

[42] *Ibid*., p. 24.

[43] Lyon, II, 314-317.

[44] Lobato Lopez, pp. 82-84.

[45] West, "The Mining Community in Northern New Spain: The Parral Mining District," p. 31.

Chavez Orozco, *Historia Economica y Social de Mexico*, pp. 163-164.

[46] Lyon, II, 147-148.

[47] Mark Beaufoy, _Mexican Illustrations, founded upon facts_ (London, 1828), pp. 272-274.

[48] Bullock, II, 225-226. Comstock, p. 207.

[49] Comstock, pp. 203-206.
Lyon, II, 305-313.

[50] Bullock, II, 98-99.

[51] Valades, pp. 226-228.

[52] _Ibid._, p. 137.

Chapter III

Agriculture

[1]Jose C. Valades, *Alamán, Estadista e Historiador* (Mexico, 1938), pp. 214-215.

[2]*Ibid*.

[3]Robert A. Potash, *El Banco de Avio de Mexico El fomento* de La industria 1821-1846 (Mexico, 1959), p. 215.

[4]Valades, pp. 216-217.

[5]There are ambiguities concerning the actual size of a caballeria, depending on time and purpose of hacienda; grazing caballerias being larger than agricultural tracts, again varying depending on specific geographical conditions related to individual land grants. For example, if a vast part of a grant was extremely mountainous and untillable or unusable and was included within a grant, this would increase the acreage averages of caballerias from an overall point of view.

[6]*Ibid*., pp. 216-219.

[7]*Ibid*., pp. 218-220.

[8]*Ibid*., p. 226.

Chapter IV

The Bank De Avio

[1]Jose C. Valades, Alamán, Estadista e Historiador (Mexico, 1938), pp. 97-98.

[2]Luis Chavez Orozco, "La Industria de Transformacion Mexicana (1821-1867)," in Coleccion de Documentos Para la Historia Del Comercio Exterior de Mexico, edited by Luis Chavez Orozco (Mexico, 1962), pp. 17-18.

[3]Luis Chavez Orozco, editor, Coleccion de Documentos Para la Historia Del Comercio Exterior de Mexico (Mexico, 1962), pp. 10-11.

[4]Robert A. Potash, El Banco de Avio de Mexico El fomento de La industria 1821-1846 (Mexico, 1959), p. 73.

[5]Ibid.

[6]Ibid.

[7]Ernesto Lobato Lopez, El Credito en Mexico (Mexico, 1945), pp. 135-136.

[8]Potash, pp. 77-79.

[9]Ibid.

[10]Lobato Lopez, pp. 135-136.

[11]Ibid.

[12]Ibid., p. 45.

[13]Ibid., pp. 77-82.

[14]Ibid., p. 58.

[15]Ibid., p. 51.

[16]Ibid., p. 56.

[17]*Ibid.*, p. 74.

[18]Potash, p. 37. Lobato Lopez, pp. 50-51.

[19]*Ibid.*, pp. 70-71.

[20]O. Ernest Moore, *Evolucion de Las Instituciones Financieras en Mexico* (Mexico, 1963), pp. 12-13.

Lucas Alamán, *Historia de Mejico*, I, 99, 100. Quoted by Clarence H. Haring, *The Spanish Empire In America* (New York, 1963), p. 177.

[21]*Ibid.*, p. 70.

[22]Potash, p. 37.

[23]*Ibid.*, p. 92.

[24]*Ibid.*, pp. 95-98.

[25]*Ibid.*, p. 106.

[26]*Ibid.*

[27]Valades, pp. 370-371.

Chapter V

The Textile Industry

[1]Jose C. Valades, *Alamán, Estadista e Historiador* (Mexico, 1938), p. 314.

[2]Robert A. Potash, *El Banco de Avio de Mexico El fomento de la industria 1821-1846* (Mexico, 1959), p. 136.

[3]*Ibid*., p. 142.

[4]Valades, pp. 370-371.

[5]Potash, pp. 142-147.

[6]*Ibid*.

[7]Jan Bazant, "Estudio Sobre La Productividad de la Industria Algodonera Mexicana en 1843-1845," edited by L. Chavez Orozco, in *Coleccion de documentos para la historia del comercio exterior de Mexico* (Mexico, 1962), p. 73.

[8]Valades, pp. 393-395.

[9]Ana Maria Hernandez, *La Mujer Mexicana in La Industria Textil* (Mexico, 1940), pp. 7-12.

[10]Potash, pp. 13-26.

[11]*Ibid*.

[12]Potash, pp. 38-44.

[13]*Ibid*., pp. 53-58.

[14]William Bullock, *Six Months Residence and Travels in Mexico* (London, 1825), I, 201.

[15]*Ibid*., II, 212-213.

[16]Miguel Lerdo de Tejada, Comercio Esterior de Mexico (Mexico, 1853), pp. 26-36.

[17]Luis Chavez Orozco, Historia Economica y Social de Mexico (Mexico, 1938), pp. 119-121.

[18]Valades, pp. 412-414.

[19]Potash, pp. 194-198.

[20]Lerdo de Tejada, p. 36.

[21]Chavez Orozco, p. 131.

[22]Potash, pp. 189-191.
Luis Chavez Orozco, "La Industria de Transformacion Mexicana (1821-1867)," in Coleccion de Documentos Para La Historia Del Comercio Exterior de Mexico, ed. by Luis Chavez Orozco (Mexico, 1962), p. 21.

[23]Bullock, II, 223-224.
Mark Beaufoy, Mexican Illustrations, Founded Upon Facts (London, 1838), p. 114.

[24]Josiah Gregg, Commerce of the Prairies, edited by M. L. Moorhead (Norman, 1954), p. 297.

[25]Chavez Orozco, p. 20.

[26]Valades, pp. 474-475.

[27]*Ibid.*, p. 388.

[28]*Ibid.*, p. 375.

[29]*Ibid.*, pp. 372-375.

[30]Bazant, pp. 72-73.

[31]*Ibid.*

[32]Lucas Alamán, *Iniciativa de ley proponiendo al gobierno las medidas que se debian tomar para la seguridad del esatdo de Tejas y conservar la integridad del territorio mexicano de cuyo proyecto emano la ley de 6 Abril de 1830*, edited by Vargas Rea (Mexico, 1946), pp. 44-45.

[33]Valades, p. 370.

[34]*Ibid.*, p. 376.

[35]*Ibid.*

[36]Bazant, p. 37.

[37]Valades, p. 393.
Bazant, pp. 38-70.

[38]Valades, p. 393.

[39]*Ibid.*, pp. 393-396.

[40]*Ibid.*, p. 395.

[41]*Ibid.*, pp. 395-397.

[42]*Ibid.*

[43]Bazant, p. 37.

[44]Antonio Garcia Cubas, *Etude Geographique Statistique, Descriptive et Historique Des Etats Unis Mexicains* (Mexico, 1889), pp. 26-28.

[45]Bazant, p. 73.

[46]Potash, pp. 221-222.

[47]Valades, p. 483.

Chapter VI

Some Conclusions and Some Questions

[1]Jose C. Valades, _Alamán, Estadista e Historiador_ (Mexico, 1938), p. 463.

[2]Sir Henry George Ward, _Mexico in 1827_ (London, 1828), II, 108-110.

[3]Valades, p. 215.

[4]_Ibid_., pp. 216-217, pp. 370-371.

[5]_Ibid_., pp. 392-393.

[6]Robert A. Potash, _El Banco de Avio de Mexico El fomento de La industria 1821-1846_ (Mexico, 1959), p. 163.

[7]Jan Bazant, "Estudio Sobrela Productividad de la Industria Algodonera Mexicana en 1843-1845," ed. by L. Chavez Orozco, in _Coleccion de Documentos para la historia del comercio exterior de Mexico_ (Mexico, 1962), pp. 75-76.

[8]Valades, pp. 369-370.

[9]Bazant, pp. 50-73.

[10]_Ibid_., pp. 68-72.

[11]See Appendix I.

[12]Valades, p. 188.

[13]_Ibid_., pp. 32-33.

[14]_Ibid_., pp. 90-91.

[15]Valades, pp. 188-196.

[16]Bazant, p. 77.

[17]Ernesto Lobato Lopez, El Credito en Mexico (Mexico, 1945), p. 139.

[18]Luis Chavez Orozco, Historia Economica y Social de Mexico (Mexico, 1938), pp. 136-137.

[19]Silva Herzog, El Pensamiento Economico en Mexico (Mexico, 1947), p. 51.

[20]Valades, p. 466.

[21]Potash, pp. 113-123.

[22]Lobato Lopez, pp. 142-146.

[23]Valades, p. 90.

[24]Potash, p. 71.

[25]Valades, p. 216.

[26]Chavez Orozco, pp. 125-126.

[27]Lobato Lopez, p. 137.

[28]Potash, p. 72.

[29]Charles A. Hale, "Jose Maria Luis Mora and the Structure of Mexican Liberalism," in Hispanic American Historical Review, XLV (May, 1965), 209-210.

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