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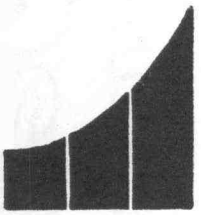

EL PROCESO COLOMBIANO DE INDUSTRIALIZACION, 1920 - 1950

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INTRODUCCION Y CONCLUSIONES.

El objetivo de esta introducción es el de presentar en forma suscinta, en español, las conclusiones de los tres capítulos entregados a Colciencias.

CAPITULO I. EL EMPRESARIO. EL INDUSTRIAL COLOMBIANO.

El Capítulo explora dos grandes preguntas: primero, en que medida es adecuado incluír al empresario Colombiano como fuente especial (o adicional) de crecimiento?. Segundo, cuáles características de este empresario podrían dar cuenta del rápido crecimiento industrial observado luego de la Gran Depresión de los Años Treintas?.

Para responder la primera pregunta, la Sección A presenta un breve resumen de lo que economistas teóricos, sociólogos e historiadores económicos han escrito sobre el tema. No es fácil probar o rechazar una posición específica a esta pregunta puesto que el crecimiento económico y empresarios (propietarios) aparecen simultáneamente. Sin embargo, nuestra lectura de la literatura sobre el tema nos lleva a concluir que: no hay mayor espacio para el empresario en la teoría económica ortodoxa, los planteamientos sociológicos de Hagen y McLelland son claramente insatisfactorios; los historiadores económicos tienden a concluír que el empresario no ha jugado papel importante en el crecimiento de economías capitalistas desarrolladas. Al final de la Sección se revisan aspectos que podrían llevar a conclusiones diferentes en los países sub-desarollados: información, tecnología, competencia externa y la presencia del estado moderno.

La conclusión de la Sección B es similar para el caso Colombiano, aun cuando por razones enteramente diferentes. Se argumenta que el empresario Colombiano se comportó

básicamente como rentista, donde la especulación en tierra urbana fue el mecanismo básico de acumulación. También se demuestra que, además de la tierra urbana, el orígen de su capital estuvo básicamente relacionado con actividades de importación, un elemento común con otros países latinoamericanos. Finalmente, se argumenta que la literatura existente (particularmente Brew) tiende a exagerar el período necesario para adquirir el control económico y político en el país; la descripción de Brew es adecuada solo para una o dos familias de propietarios industriales.

En otros artículos el autor ha sostenido que no basta con analizar precios relativos y protección para entender lo sucedido en Colombia después de 1930; inversión. cambio técnico y otras variables 'de oferta' deben complementar la explicación. Cuáles elementos podrían dar cuenta parcial de lo sucedido, desde el lado del empresario?.

Un primer factor reside en la alta disponibilidad de capital 'liquido' en tierras urbanas. Una vez los precios relativos se mueven en favor de la industria, es posible vender tierra e invertir en aquellos sectores relativamente más rentables.

Segundo, la elevada concentración de la propiedad y de la producción en la industria Colombiana permitió que la información de rentabilidades relativas estuviese disponible, y parcialmente sustituyó el papel jugado por los mercados de capitales en los países desarrollados.

Finalmente, se analizan algunos aspectos de la relación entre empresarios y estado. Se analizan los intereses y logros las dos Asociaciones de Industriales creadas, precisamente en 1930, con el interés fundamental de luchar en favor de una tarifa 'adecuada.

CAPITULO II. OFERTA DE TRABAJO.

Cuál fué el papel jugado salarios y trabajadores en el crecimiento industrial Colombiano en el período? La demanda industrial por trabajadores era mínima en comparación con la 'disponibilidad' potencial. La industria solo requirió 7% del empleo generado por la agricultura, y otros sectores como servicios y artesanado generaron mayor 'empleo'. Es conocido, además, que los salarios agrícolas permanecieron relativamente constantes hasta 1968, y los de la construcción hasta mediados de los 50's.

Es válido, en este escenario, utilizar los aportes metodológicos y empíricos suministrados por la amplia literatura sobre modelos duales. los beneficios exógenos del cambio técnico habrían sido enteramente apropiados por capitalistas, con la posibilidad de nueva reinversión y crecimiento.

La Sección A del Capítulo discute algunos aspectos centrales de los modelos duales: sectores, definiciones alternativas de 'salarios', y criterios propuestos (básicamente por Lewis) para entender si la economía se comporta como una economía dual. La Sección B presenta aquella evidencia que, a priori, llevaría a pensar que ciertos elementos fundamentales en los modelos duales estuvieron presentes en la economía Colombiana en el período. La Sección C, luego de discutir la evidencia sobre salarios y participación, concluye básicamente que no se cumple ninguno de los dos criterios sugeridos por Lewis.

Los salarios reales crecieron marcadamente en la industria Colombiana. El nivel de vida se elevó en el caso del sector textil y, más importante, la relación entre salarios nominales y precios (del bien final en cada sector, relación que se denomina salario producto), creció en todos los sectores analizados. El precio de los alimentos tuvo una influencia importante, y

los salarios-producto se movieron parcialmente con los terminos de intercambio alimentos-bienes industriales. También crecieron los salarios con los cambios en productividad.

Cuáles fueron las razones de que los salarios reales creciesen?. Existen diferentes explicaciones en la literatura, y la Sección B.3 revisa dos de ellas. La influencia sindical fue importante, más no la legislación estatal. La mayoría de conflictos en Medellín se presentaron, precisamente, cuando los salarios caían con respecto al costo de vida. Los empresarios finalmente accedieron a que ello no sucediera. También en Bogotá, aun cuando el nivel de conflicto fue mucho mayor. Trabajadores con un mayor nivel de politización exigieron condiciones consideradas frecuentemente inadmisibles por los empresarios.

Sin embargo, el argumento central del Capítulo es que los salarios reales subieron por que la mano de obra era escasa. El análisis de más de 3000 hojas de vida de trabajadores en las empresas permite concluír que es erróneo (como lo hacen los modelos duales), asumir que la mano de obra requerida es no calificada y por lo tanto ilimitada. Las firmas emplearon artesanos, trabajadores con niveles de alfabetización muy por encima de los promedios para el país, y trabajadores que ya habían trabajado en otras fábricas (posiblemente alimentos).

Nuestro análisis de las características de la mano de obra en las diferentes empresas permite explicar, adicionalmente, por qué el nivel de conflicto fue diferente en ambas ciudades. Además de los argumentos tradicionalmente empleados, como el de la alta participación de mujeres en el sector textil, se argumenta que el mayor peso de migrantes en el caso de Bogotá tuvo que ver con el mayor nivel de combatividad. Por supuesto, también es importante el hecho de que los salarios crecieron más rápido en el sector textil.

La Sección final del Capítulo revisa y critica algunos de los elementos centrales en los modelos duales. En especial, el supuesto de que altas utilidades automáticamente garantizan inversión; de que los términos de intercambio no cuentan; o de que se trata de una economía cerrada. Todos ellos son elementos que necesariamente deberán ser discutidos si se quiere entender el crecimiento industrial en el periodo.

CAPITULO III. TOPICOS RELACIONADOS CON EL PAPEL DE LA DEMANDA.

El Capítulo III introduce diferentes elementos en la discusión sobre demanda y crecimiento. En primer lugar trata de analizar qué tan segmentados eran los mercados para la industria en los 30's y 40's. Concluye básicamente que ya en ese entonces el mercado de Bogotá y de las regiones cafeteras era un mercado importante. Estas conclusiones coinciden con los planteamientos relativamente recientes de Fernando Botero sobre la industria en Antioquia.

La segunda Sección descompone el ahorro y, a partir de allí, trata de 'explicar' la evolución de la inversión privada en el país. El sector público jugó un papel estabilizador en el ahorro (e inversión) total nacional. Posteriormente se miran simples correlaciones entre variables de demanda y producción. Solo los agregados monetarios guardan relación con la evolucion de la producción y, sorprendentemente, el valor de la cosecha cafetera no parece haber influido en los cambios en producción. Estas conclusiones son importantes per se, y afectan significativamente el estudio posterior que adelanta el autor sobre la industrialización en el período. Sugiere, por ejemplo, que los precios relativos fueron más importantes que la demanda en la explicación de lo sucedido. También, que debe darse poca importancia al café en el análisis del proceso industrial en el período.

La Sección D aborda un tópico que gana peso en la literatura moderna sobre el papel del estado en la expansión de demanda. En que medida los gastos estatales simplemente desplazan ('crowd-out') la inversión privada?. El paradigma keynesiano no da peso a dicho efecto al asumir desempleo masivo de recursos; pero la situación podría ser enteramente diferente. Nuestro análisis concluye que no existió 'crowding-out' en el período.

La Sección E aborda un tópico enteramente diferente, pero también relacionado con el papel de la política económica y demanda durante el período. Son pocos los intentos que se han hecho en el país por incorporar la reciente literatura sobre el déficit de 'pleno empleo', para observar, básicamente, en que medida el crecimiento de la demanda fue inducido o autónomo. El déficit puede ser producido automáticamente por la depresión, en cuyo caso sería erróneo analizar fases o sub-períodos contraccionistas o expansionistas en la política económica. La conclusión central de la Sección es la de que prácticamente la totalidad de los deficits (o superavits) observados durante los 30's y 40's fueron inducidos por el ciclo. No se dieron cambios importantes en política económica.

THE ENTREPRENEUR. COLOMBIAN INDUSTRIALISTS AND MANAGERS.

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CHAPTER II. THE ENTREPRENEUR. COLOMBIAN INDUSTRIALISTS AND MANAGERS

INTRODUCTION

This Chapter explores two main issues: first, to what extent was the Colombian entrepreneur-industrialist an additional source of economic growth?. Second, which characteristics of the Colombian entrepreneur might account for the very rapid industrial growth which followed the depression of the 1930's?.

In answer to the first question, Section A gives a summary of what economic orthodoxy, sociology and economic historians have said on the issue. Entrepreneur-managers and growth generally coincide, making the topic an elusive one. Our review of the literature suggests that his role is much less prominent than was once thought, and that growth differentials in those countries can be explained mainly in terms of purely economic variables such as export orientation, the size of the market and so on. This conclusion is partially derived from the literature on 'patterns of growth' (Chapter I), but we now focus more closely on the experiences of England, France and the United States. The last part of the Section highlights some new elements in the case of today's LDC's, notably information technology, foreign competition and the presence of the 'modern-protectionist- state.

In Colombia, too, the role of the entrepreneur was less prominent than has been thought, as Section B shows. We base our conclusion on three different arguments: first, 'unproductive' investment in urban land was always much higher than investment in industry: industrialists behaved more as rentiers than as capitalists proper. Second, as in many other Latin American countries, import activity was the main source of the wealth of future

industrialists. Third, most industrialists accumulated their wealth in a relatively short period of time.

This conclusion, however, leaves us with a problem, since in Chapter VIII below we are going to demonstrate that the rapid growth experienced by Colombian industry after the shock of 1929 had to do more with supply factors (investment, wages and productivity) than with shifts in demand.

The preponderance of assets held in the form of urban land suggests an second hypothesis. Urban land is highly liquid. When relative prices moved in favour of industry after the shock of the 1930's, financial resources could easily be transferred.

Section C presents two additional hypotheses. The lack of information characteristic of most underdeveloped countries -no financial markets available- will normally delay capital shifts to more profitable sectors, but in the case of Colombia this problem was less important due to the very high concentration of industrial ownership (industrial production was also very concentrated). Information on relative profitability was readily available, at least within the industrial sector.

Finally, economic policy, an in particular sectorial policy, favoured the Colombian industrialists. Analysis of the impact of economic policy will be made in other Chapters, but in the final Section of the Chapter we highlight some aspects which might explain why favourable policies were implemented. In reviewing the relation of the Colombian entrepreneurs and the State, we attempt to identify the issues that entrepreneurs themselves considered crucial. To do so, we study the main goals and achievements of the two Associations of Industrialists created in Colombia just after 1930; the initial objective of both was to fight for a favourable tariff.

A. THE ENTREPRENEUR IN THE SOCIAL SCIENCES. LESS IMPORTANT THAN ORIGINALLY THOUGHT.

In this section we will inquire into the importance of the entrepreneur as an additional source of economic growth. We will mainly consider the classical examples of industrialization, but we will make some comments on the new characteristics of the LDC's today.

We start with a summary of Schumpeter's ideas on the issue and then consider evidence on today's industrialized countries. Our main conclusion will follow North:

> "...productivity changes stemming from technological innovations, are, in part at least, a nearly autonomous response to successful expansion of industries in an acquisitive society under competitive market conditions...The role of entrepreneur and innovator is an important one, but I would downgrade its significance for the study of growth in economics which: 1.Followed in the process of industrial development and 2.Were acquisitive oriented under competitive market conditions".[1]

Schumpeter's Theory of Economic Development[2] seems to be the logical place to start our discussion on the role of the entrepreneur. The primary function of his 'captain of industry'[3] is to carry out new combinations[4]; he shows initiative, authority and foresight[5]. His behaviour is mainly determined by extra-economic factors like the will to conquer, the will to fight and to prove oneself superior to others[6]: and in nine cases out of ten super-normal

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[1] D.C.North, The Economic Growth of the United States 1790-1860, New York, 1961, p.8

[2] J.A.Schumpeter.The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle, Cambridge, Massachusetts, Harvard University Press, 1968.

[3] The term closest in meaning to 'entrepreneur'; preferable to 'financier', 'promoter', 'capitalist', 'shareholder', or 'risk-taker'"

[4] Ibid, p.66

[5] Ibid, p. 74

[6] "The dream and the will to found a private kingdom, usually, though not necessarily, also a dynasty... what may be attained by industrial or commercial success is still the nearest approach to medieval lordship possible to modern man. Its fascination is specially strong for people who have no other chance of achieving social distinction. 2.There is the will to conquer: the impulse to fight,

Intelligence and energy account for industrial success[7]. The entrepreneur modifies or creates consumer tastes, he does not adapt to them.

Is this characterization entirely credible?. Schumpeter's definition is even more restrictive, since entrepreneurs are such only a few times in their life. for evervone is an entrepreneur only when he actually carries out new combinations, and loses that character when he has built up his business[8]

For many reasons there is scant use for these criteria in our analysis of the Colombian entrepreneur[9]. First, Schumpeter was trying to give an account of major transformations in the history of capitalism, and not of 'normal' times. Events such as the industrial revolution in England, the rise of the railroads or of the automobile are exceptional by any standards. Further, not only are many of the definitions he uses tautological (though nevertheless useful)[10], but in order to confirm some of his hypotheses we would need biographers who are experts in psychoanalysis[11]. Finally, his definition of new combinations is so general that

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to prove oneself superior to others, to succeed for the sake, not for the fruits of success, but of success itself; 3. Finally, there is the joy of creating, of getting things done, or simply of exercising one's energy and ingenuity". Ibid, p.93

[7] J.Schumpeter, 1962, Capitalism, Socialism and Democracy, New York and Evanston, p.

[8] J.A.Schumpeter.The Theory of...p. 78 (my italics)

[9] Also problematic for our purposes is Schumpeter's definition of economic development, which involves new combinations rather than growth. For Schumpeter, the growth of population and wealth "calls for no qualitative new phenomena, but only processes of adaptation of the same kind as the changes in the natural data..." "By development ...we shall understand only such changes in economic life as are not forced upon it from without but arise by its own initiative, from within". Ibid, p.63 and p.78

[10] According to Schumpeter's definitions, the entrepreneur carries out new combinations, and economic development occurs when there are new combinations. Ergo, the entrepreneur always produces economic development. But it is sometimes useful to separate growth from new economic combinations, as Schumpeter does, since this emphasizes the qualitative aspects of change. The British Industrial Revolution was indeed a 'revolution', even though the annual rate of growth of industrial output was less than 2% before 1780, 3%-4% in 1780-1792; 2%-3% in 1792-1818. See P.H Wilken, Entrepreneurship. A Comparative and Historical Study, Norwood, New Jersey, Ablex Publishing Corporation, 1979, p.

[11] P. Kilby P, Entrepreneurship and Economic Development, New York, The Free Press, 1971; P.H.Wilken, Entrepreneurship,

practically every person dealing with production and profits will somehow be an entrepreneur. The five new combinations specified by Schumpeter are: the introduction and creation of a new good (1); or a new method of production (2); or a new market (3); the opening of a particular source of supply (4); and the creation of a new organization -e.g a monopoly- (5)[12].

We have deliberately chosen Schumpeter's least practical concepts. He has other ideas which are much more relevant for our purposes. The importance given to credit as opposed to private savings -though not necessarily for the reasons he had in mind-[13]; his suggestion that new combinations derive mostly from new firms[14]; that entrepreneurs come from all strata of society[15]; and that the entrepreneur, capitalist, and administrator are generally different; his suggestion that the entrepreneur acts as a deviant generating economic resistance in the groups threatened by the new combinations; development occurring in spurts and through 'creative destruction': these ideas are all interesting and worth considering.

Few important developments have taken place since the appearance of Schumpeter's book as will transpire from the following paragraphs. The term entrepreneur was first coined by an economist[16] but orthodox economic theory has very little to say on the issue, since its

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[12] J.A. Schumpeter, The Theory of..., p.66

[13] According to his views, credit will be needed for the undertaking of new combinations, savings for old combinations. This assumes full employment, a characteristic of his circular flow of income.

[14] It is not the owner of stage-coaches who builds railways. This fact creates even more discontinuities in the growth process Schumpeter is trying to describe.

[15] A.Gerschenkron, 'Discussion', American Economic Review, May, 1968, supplement, p.97

[16] Cantillon. For him, the entrepreneur buys factor services at 'certain' prices with a view to selling the product at uncertain prices in the future. Thus, the entrepreneur's sole function was the bearing of non-insurable risk. But the value of this criterion has since eroded. J.B. Say amalgamated risk taking and management (bringing together the factors of production). For Smith the notion of risk disappeared altogether, and the capitalist simply provides capital. See P. Kilby, Entrepreneurship...p.2

methodology of minimization-maximization precludes clever rules, ingenious schemes, brilliant innovations, or charisma. The concepts of entrepreneur and monopoly are in some sense related and the latter is not the forte of economic theory[17]. Finally, no empirical criteria have been established for the identification of ıe entrepreneur, and we cannot therefore tell whether a country really lacks entrepreneurs, or whether its entrepreneurs are prevented from functioning properly. The economist is more inclined to the second hypothesis since it is more functional[18].

It is likely that most firms do not operate on the production possibility curve and there seems to be a large unexplained "residual" in the relation between inputs and output, among the explanations of which the entrepreneur may, but does not necessarily, figure; economists have been unable to determine how to distribute the "residual" -if it exists- between entrepreneurs and the other possible factors, and the whole residual could just be the product of engineers and ordinary workmen[19]. Rigourously we can not go much further than that and, on the whole, Veblen's complaint about [orthodox] economic theory seems valid in this area[20].

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[17] W.J.Baumol, 'Entrepreneurship in Economic Theory', American Economic Review, May, 1968, supplement, p.67. Minimization-Maximization of something other than profits (e.g. sales) will not help, and even if time is introduced into the analysis the problem remains. Game theory does not seem very relevant for the issue either.

[18] E.Domar, 'Discussion', American Economic Review, May, 1968, supplement, p.93.

[19] See E.Domar, Op.cit. p. 93. The importance of the 'residual' is also hotly disputed. Baumol does not seem very convincing in arguing that Jorgenson and Griliches' results "... do not necessarily imply any denigration of the entrepreneur. They argue merely that entrepreneurship and innovation have achieved growth in outputs only with the aid of corresponding increases in input quantities"(my underlining). See W.J Baumol, 'Entrepreneurship in Economic Theory', American Economic Review, May, 1968, supplement, p, 66, fn.p.66.

[20] The manager-producer is "a lightning calculator of pleasures and pains, who oscilates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact. He has neither antecedent nor consequent. He is an isolated, definitive human datum, in stable equilibrium except for the buffets of impinging forces that displace him in one direction or another. Self-imposed in elemental space, he spins symmetrically about his own spiritual axis until the parallelogram of forces bears down upon him, whereupon he follows the line of the resultant. When the force of the impact is spent, he comes to rest, a self-contained globule of desire as before. [he] is not a prime mover. He is not the seat of a process of living, except in the sense that he is subject to a series of permutations enforced upon him by circumstances external

We may conclude by saying that economic theory does not offer a great deal of help in dealing with potentially important issues like the role of the entrepreneur; [Orthodox] economic theory is not very powerful outside an specific area, and under highly limited assumptions.

Subsequent to the important contributions of Parsons and Weber the sociological analysis of the entrepreneur has degenerated into a sociology of behaviour. After reading McClelland and Hagen's theories on deprivation of status and on child-rearing, one cannot but agree with Gerschenkron that "probably the best that has come out from these very ingenious but exquisitely non-operational speculations is the admission that 'toilet training of infants is no longer to be regarded as the almost absolute key' to the pertinent problems'..."[21].

Economic historians have said important things on the subject but paradoxically their findings seem to down-play the role of the entrepreneur in economic growth, at least for the industrialized countries. It is no coincidence that some prominent economic historians like D. North and D.S.Landes, who themselves started as entrepreneurial historians, totally abandoned the concept in later works[22]. North summarizes their position in the quotation given in the first paragraph of this section.

Also, reviewing economic growth in 6 industrialized countries -England, France, Prussia-Germany, Japan, The United States and Russia- Wilken concludes that the entrepreneur had little independent effect on industrial growth. In Great Britain, during the first industrial

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and alien to him". T.B.Veblen. 'Economics and Evolution', The Place of Science in Modern Civilization, New York, 1919, p.

[21] Gerschenkron, 'Discussion', American Economic Review, May, 1968, supplement, p.96

[22] D.S Landes, "Technological Change and Development in Western Europe. 1750-1914", in H.J.Habakkuk & M.Postan (Eds.), The Cambridge Economic History of Europe (2nd ed.), (Vol 6,I), Cambridge University Press, 1965; D.S Landes The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750. D.C. North The Economic Growth of the United States 1790-1860, New York, 1961

revolution, opportunities for growth were in any case favourable; conditions in France were less favourable and growth correspondingly lower. The entrepreneur was not very important to the growth of the United States where the rapid influx of migrants from European countries plus extensive technological borrowing 'produced' industrial growth. and only in the cases of Germany, Japan and Russia was his influence discernible[23].

The main conclusion of this section is that the entrepreneurial factor was not in great demand for the first industrializing countries. The role of the entrepreneur seems to have been over-emphasized by authors like Schumpeter, market forces playing a larger role. Social sciences have not been very successful in dealing with the subject, mainly because the questions are not easy. Take some of those proposed by Gerschenkron in his agenda for future research: the effect of the business cycle upon the attitudes of managers and owners; variations in the behaviour of generations of entrepreneurs depending on whether their formative years of business experience fell into periods of depressions or upswings; what happened to time horizons of entrepreneurs when the industrialist replaced the trader as a dominant figure on the economic scene; a comparison of time horizons of investment bankers and industrialists; interrelationship between changing standards of commercial honesty and modern economic development; attitudes to obsolescence and change.[24]

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[23] Wilken seems to give some weight to entrepreneurship in the case of Germany but later on he argues that what was really important was the larger involvement of the government; this improved the economic and non-economic conditions that had been retarding the appearance of entrepreneurship. Something similar is argued for the case of Japan. For Russia Wilken argues that entrepreneurship was an additional factor of growth before 1880, not afterwards when opportunities improved as a result of foreign intervention. See P.H.Wilken, Entrepreneurship..., pp.254-256. In early works Landes considers French capitalists to have been largely passive as a result of their ties with the "old regime". Gerschenkron critisizes his comparison between France and the United States. The more relevant comparison between France and Germany throughs different ressults. See D.S Landes, "French Entrepreneurship and Industrial Growth in the Nineteenth Century", The Journal of Economic History, 1949, 9, pp.45-61; A. Gerschenkron, Economic Backwardness in Historical Perspective. A Book of Essays; Cambridge, Massachusetts, Harvard University Press, 1962, p.

[24] A.Gerschenkron, 'Discussion', American Economic Review, May, 1968, supplement, p.

There are some additional elements in the case of today's LDC's which deserve especial consideration before we finish our general discussion. The entrepreneur attains prominence when risks, uncertainty and lack of information come into the picture, all of them important characteristics of the markets in the LDC's[25]. There are also important differences in such areas as technology, foreign competition and the presence of the 'modern' state. We shall highlight the main new elements in accordance with some of Schumpeter's new combinations [26].

- The Creation of a New Market and Technology. Three considerations bear on function (1) introduction of new goods: creation of new demand, foreign competition, and protection policies. The entrepreneur in the LDC's is rarely involved with the creation of new demand. The market already exists when he decides to substitute national goods for goods hitherto imported.[27]. But he faces external competition to a degree never encountered by today's industrialized countries, still less by the pioneer-states. Lastly, today's LDC's can count on the help of the 'modern' State. The level of tariff barriers in the LDC's today has no precedent in the history of the DC's[28].

Schumpeter's second function, new methods of production, is affected by two factors: the stock of available technology (2a) and capital requirements (2b). As regards technology, today's LDC's can count on a reservoir of inventions not available to the industrialized countries during the earlier stages of their industrialization. Not all authors agree that this is

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[25] In such cases the production function is not completely specified and there is not a one to one relation between inputs and output: not all factors of production are marketed (e.g. management or information); the capacity to obtain finance for the firm may depend on family conections rather than on willignes to pay interests; political contacts may be fundamental.

[26] J.A.Schumpeter, The Theory of ... p.66

[27] The entrepreneur of the British industrial revolution had to combine two or more of the roles of capitalists, inventor, innovator and manager so that his success demanded wide ability. This does not seem to be the case in our countries.

[28] I.M.D.Little, T.Scitovsky and M.Scott, Industry and Protection in Less Developed Countries. OECD, pp.

a positive factor[29], and the difference is less important than generally believed. In England, for example, two of the leading innovators in the cotton industry during the Industrial Revolution were Arkwright and Cartwright, the former an uneducated barber and horse-dealer, the latter an Anglican clergyman[30]. For the United States, the very detailed study of Strassman on textiles, machine-tools, electrical and metallurgical industries, concludes that the risks involved in technological innovation were not great[31] .

Capital requirements (2b) are much larger today, which makes thinks more difficult. In late eighteenth-century England, the amount of investment required to start a plant was equivalent to four months' wages; in early nineteenth century France this had become six to eight months. The figure for India and Turkey in the mid 50's was 220-350 months[32], and larger than 100 months in Colombia in the 30's.

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[29] It is not only the traditional argument of inappropriate technology. For Hirshman, for example, 'too much' of a 'good thing' could produce negative effects. Few new inventions indicated potential investors where to invest in the developed countries. The seemingly endless range of possibilities open to the LDC's calls for cooperation rather than entrepreneurship. Cooperation is an scarce factor in these last countries. See A.Hirshman, The Theory of Economic Development, p.19 (

[30] P.H. Wilken, Entrepreneurship. p. 91

[31] Ibid, p. 196.

[32] See P.Bairoch, Industrial Revolution and Underdevelopment, 197, Chs. 11 and 13; P.Kilby, Entrepreneurship ... p. 5. The figure for one of the leading textile firms, Fabricato, was close to 116 months in 1936.

B. THE 'TYPICAL' COLOMBIAN ENTREPRENEUR.

To what extent was the Colombian entrepreneur-industrialist an additional source of economic growth?. On the main, and for entirely different reasons from those of Section A, our answer will be negative. We base our case on three different arguments: first, 'unproductive' investment in urban land was always much higher than investment in industry. Industrialists behaved more as rentiers than as capitalists proper; second, as in many other Latin American countries, import activity was the main source of the wealth of future industrialists; third, most industrialists accumulated their wealth in a relatively short period of time.

However, our characterization of the Colombian entrepreneur will also allow us to highlight some hypothesis which could partially account for the rapid expansion of industrial production after the shock of the 1930's.

1. THE ANTIOQUENOS. HOW DYNAMIC?.

The analysis of the emergence and behaviour of the Colombian entrepreneur is of considerable interest. The entrepreneurs of Antioquia (Antioqueños), attracted the attention of leading experts in the field more than twenty years ago. E.Hagen considered this group as one of the foremost examples of his thesis of deprivation as a pre-requisite for the creation of entrepreneurship.[33] His work is controversial.[34] it has even been said that his main

contribution was to bring other researchers into the field.[G35]

The consensus that has emerged over the last twenty years has tended to impose certain conclusions which we consider unsatisfactory. This conviction is derived mainly from new information (see Appendix A-3), though we do, of course, draw heavily on previous contributions.

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[33] E.Hagen, "The Transition in Colombia", in P.Kilby, Entrepreneurship and Economic Development, New York, The Free Press, 1971; also, E.Hagen, On the Theory of Social Change, Mass, MIT Press, 1962. He also considers the case of Anglo-Saxons in England, the Tokugawa in Japan, two indonesian towns, and Burma..

[34] Not only his empirical studies in other countries have been subject to valid criticism; but the direction of causality argued is difficult to prove. Finally, his whole theoretical construction -and the role given to the value system in general- falls under Gerschenkron's "very ingenious but exquisitely non-operational".

On the first point -empirical studies in other countries-, Wilken argues convincingly that his figures for the analisis of the British entrepreneur are entirely biased. On the direction of causality and the importance of social values things are not as clear as presented by Hagen. Other authors argue, for example, that social approval -not dissaproval- is the prerequisite. But even if the correlation between dissaproval and entrepreneurship were present, it could be argued that they entrepreneurs were despised because they were rich and entrepreneurial, not vice-versa; Schumpeter's seems to be closer to the truth when arguing that the entrepreneur acts as a deviant generating economic resistance in the groups threatened by the new combinations. Maybe both are true; Wilken considers two kind of entrepreneur: the mainstream entrepreneur and the marginal entrepreneur.

On non-operationality we must remember that the period needed to create entrepreneurial attitudes varies from 80 to 200 years for Hagen, a large period indeed. Also, the whole area of values and entrepreneurship is very slippery: social disapproval-approval- could need to be reinforced by the sanctions of the State to have any real influence; and the latter may or may not reflect the dominant value system. On this issues see P.H.Wilken, Entrepreneurship...p.; A.Gerschenkron, 'Discussion'...; R.Brew. El Desarrollo Economico de Antioquia, Bogotá, Banco de la República, 1977, pp.415-416.

[35] Some of the arguments are based in F.Botero, La Industrializacion en Antioquia. Genesis y Consolidaci[on, 1900-1930, Medellin, Centro de Investigaciones Econóomicas, Universidad de Antioquia, 1984A; A.López Toro. Migración y Cambio Social en Antioquia en el Siglo XIX, Bogotá, CEDE, Universidad de los Andes, 1970; F.Safford, Aspectos del Siglo XIX en Colombia. Medellín, Ediciones Hombre Nuevo, 1977; F.Safford, The Ideal of the Practical. Colombias Struggle to Form a Technical Elite, Austin & London, University of Texas Press, 1976; A.Twinam, "Comercio y Comerciantes en Antioquia" in FAES, Los Estudios Regionales en Colombia. El Caso de Antioquia, Medell[in, FAES, 1982.

It must be accepted from the outset that the antioqueños were a dynamic group, and closely associated with the creation of industry. Rich Antioqueños migrated to Bogotá at the beginning of the XIX Century and formed a distinctive group in that city[36]. The dynamism of Antioqueños was observed by foreign visitors; they were described as the 'Scots' of the country, were awarded Spanish- Jewish ancestry, and so on. They enjoyed the reputation of being energetic, industrious, thrifty, and hungry for property.[37] For Hagen:

> "it is a Colombian national myth that virtually all of the nation's important industrial enterprises are run by Antioqueños". 'if they did not found them, it is said, 'they own them now'....The facts do not support these extreme versions of the myth. Capable and effective entrepreneurs have arisen in every region of the country. Yet the predominance of antioqueños is impressive..."[38].

The information we provide in Section C entirely corroborates Hagen, and it shows that in 1936-45 most of the important firms in Bogotá were owned by Antioqueños.[39] What was the origin of this dominance? It will be shown in the next Section that Antioqueños and Bogotanos alike held most their assets in urban land; their behaviour was that of rentiers rather than entrepreneur-capitalists. Their dominance can therefore be partially explained by their greater assets, something related to the presence of gold and mining in Antioquia (Section B.3).

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[36] Arrubla, Montoya, Santamaría. See F.Botero, La Industrializacion en Antioquia. Genesis y Consolidación, 1900-1930, Medellín, Centro de Investigaciones Económicas, Universidad de Antioqui , 1984, p. 19. We must also include the Restrepo Family. Gustavo and David Restrepo will become major shareholders in the firms in Bogotá in the XX Century.

[37] "..."more practical and self-asserting than any other people of the country. He is noted in Colombia for his business ability and as a shrewd trader, and has invaded almost every region of the country, engaged in all pursuits of life". U.S.Department of Commerce. Bureau of Foreign and Domestic Commerce. Colombia. A Commercial and Industrial Handbook (by P.L.Bell), 1921, p.38. Their y resemblance with the Scotish in U.K.Public Record Office, Annual Report, 19, p.

[38] E.Hagen, "The Transition in Colombia", in P.Kilby, Entrepreneurship ...pp. 203. For a sample of 119 firms with more than 100 workers his Table 10-2 shows that Antioqueños created 63% of those firms founded by 'nationals'; 29 out of 161 were founded by 'Persons of Foreign Origin'.

[39] In 1935-49 Bavaria was already controlled by Antioqueños. Among the 10 largest shareholders were: the Angel family (it includes Almacén Ancla, Industrial y Agrícola S.A -created in 1942-., and Nacional de Inversiones S.A -created in 1942-), H.Maynham, J.Mora, F.L.Moreno, R.Piedrahita, Cía Suramericana de Seguros -owned by Coltejer, Coltabaco and Cervecería Unión as we saw before-, J.P.Toro, and R.Vélez. A.Angel, J.Mora and Cia.Suramericana de Seguros in Cementos Diamante.

2. ASSETS AND ASSET DIVERSIFICATION

Not much is gained by saying that rich people in the country invested in many different activities in order to diversify risks, since this is probably common to 'large' wealth-holders in any country. It is necessary to quantify the different weights of the various assets in order to improve our understanding of the process. Special emphasis will be given to unproductive land as compared with other 'productive' activities; and to possible differences between Antioqueños and other groups inside the country.

Table 1 presents information on assets for 50 rich people in Bogotá and Medellín.[40]. Table 2 differentiates 'Industrial Shareholders", 'Non Industrial Shareholders', the 'largest industrial shareholders'[41] and 'the wealthiest' (top 1/3).

Antioqueños were much richer (on average -the variation in the levels of wealth was also higher). They invested a larger percentage of their fortunes in industry (23% vs 14% for Bogotanos), and a higher percentage in 'liquid' assets, but not, as Twinam claims, because they looked down on land[42]. The percentage of wealth invested in land was impressive and similar for both groups. The level of wealth of 'Industrial Shareholders' was similar in both cities. Industrialists were not the richest members of the group -this is clearer in Medellín.

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[40] Based on 'hijuelas'. When a -rich- person dies his wealth is assessed by 'experts' in order to distribute it among the heirs. This is done even if he does not leave a 'Testament'. 27 'hijuelas' were collected in Bogotá and 20 in Medellín .

[41] There are two definitions of 'large': definition (a) comes from the information of the number of shares in the firms; definition (b) from 'Hijuelas'.

[42] A. Twinam, "Comercio y Comerciantes en Antioquia" in FAES, Los Estudios Regionales en Colombia. El Caso de Antioquia, Medellín, FAES, 1982, p. 130

Our first conclusion is, then, that Colombian industrialists behaved mainly as 'rentiers', industry being always of secondary importance; this is a picture which differs radically from previous literature. Investment in land was not necessarily 'irrational' [43], but it was inimical to economic growth. There are other reasons as to why we consider that the role of the Colombian-Antioqueño has been exaggerated (see below), but ignorance of the importance of land is the main one.

The importance of land has other important consequence related to the rapid growth in industry after the shock of the 1930's: liquid urban land facilitated the transfer of funds when relative prices moved in favour of industry..

[43] Land was a liquid asset, risks were low compared with rural land or with other productive investment, and 'profits-rents' were extremely high. The information we have on the price of land is very scattered and unreliable. However, using some rough estimates for Medellín, observers of the time considered that if one of the important industrial firms had invested in land, the price of its shares would have been 15/20 times larger. See F.Gómez and A.Puerta, Biografía Económica de las Industrias de Antioquia, Bedout, Medellín, 1945, p.26

TABLE 1

ANALYSIS OF TESTAMENTS - "HIJUELAS

	Media		Media	
	Bogotá	Medellín	Bogotá	Medellín
Number	21	29		
Capital (Index)	85.0	48.2	53.1	19.0
% in Industry	22.3	14.5	16.0	7.1
% in Land	43.5	47.0	4.6	46.3
% in Urban Land	34.8	9.5	31.7	35.7

TABLE 2

INDUSTRIAL SHAREHOLDERS COMPARED WITH OTHER GROUPS

	Mean		Median	
	Med.	Bog.	Med.	Bog.
I. NUMBER OF:				
No Industrial Shareholder	11	26		
Industrial Shareholder	10	3		
Large Industrial Shareholder (a)	6	3		
Large Industrial Shareholder (b)	11	6		
Wealthiest. Top 1/3	11	6		
Total	21	29		
II.TOTAL CAPITAL (Index)*				
No Industrial Shareholder	100.0	42.4	56.8	15.0
Industrial Shareholder	68.5	99.1	49.0	53.9
Large Industrial Shareholder (a)	95.3	99.5	51.8	53.9
Large Industrial Shareholder (b)	127.1	164.4	109.8	133.8
Richest 1/3	139.0	174.6	109.8	151.6
III. % IN INDUSTRY				
No Industrial Shareholder	10.9	11.4	1.1	4.3
Industrial Shareholder	35.8	39.3	32.5	31.0
Large Industrial Shareholder (a)	48.5	39.3	48.5	31.0
Large Industrial Shareholder (b)	34.7	35.8	33.0	31.5
Richest 1/3	24.1	21.4	18.0	25.0
IV.% IN LAND				
No Industrial Shareholder	53.6	47.7	51.0	45.4
Industrial Shareholder	41.3	41.0	40.5	54.0
Large Industrial Shareholder (a)	25.5	41.0	21.5	54.0
Large Industrial Shareholder (b)	39.8	38.5	50.0	50.0
Richest 1/3	48.6	49.2	51.0	54.0
V.% IN URBAN LAND				
No Industrial Shareholder	37.6	8.0	40.0	38.4
Industrial Shareholder	32.0	22.0	22.6	12.0
Large Industrial Shareholder (a)	19.9	22.0	14.0	12.0
Large Industrial Shareholder (b)	29.5	28.4	40.0	27.0
Richest 1/3	37.1	36	40.0	46.0

*: No Industrial Shareholder in Medellin -Mean-=100
Sources and Methodology: See Table 2
All the figures of the Table come from 'Hijuelas'.
Industrial Shareholder if he has shares in any of the firms in our sample.
Large Industrial Shareholder:
(a) If he is one of the 103 largest shareholders. The information comes from Minutes of the Asambleas and from Balance Sheets (see Appendix 3)
(b) Ranking by the size of Industrial Capital, if his/hers industrial capital is in the top 1/3. Information comes from Hijuelas Wealthiest, Top 1/3. Ranking by the size of Total Assets. Information comes from Hijuelas.

3. ORIGIN

Industrial owners had two common characteristics in most Latin American countries: they were foreign(1); and they were import merchants(2).[44]

[44] For Brazil see W.Dean, The Industrialization of Sao Paulo 1880-1945, Austin & London, Institute of Latin American Studies, University of Texas Press, 1969, Chapters 2 and 4.

For Uruguay, see A.Beretta, "Desarrollo Industrial del Uruguay y Formación de un Capital en el Sector (1875-1930)", (mimeo), Centro de Estudios Latinoamericanos, Universidad de la República, Montevideo, presentado en el VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987. In 1890 foreigners represented 47% of the people of Montevideo, they controlled 86% of industrial firms, and 80% of industrial production; fifty years later 40% of industrial

The role of foreign trade in the creation of industrial promoters has been emphasized by Hirschman, though we do not entirely accept his distinction between export led growth and import substitution[45]. All Latin American industrialization took the form of import substitution, even under conditions of export-led growth, and there are some intuitive explanations as to why importers played the central role:[48].

-First, importing requires some locally performed operations, and the importer had to 'manufacture' goods which did not come fully processed.[47]

Montevideo, presentado en el VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987. In 1890 foreigners represented 47% of the people of Montevideo, they controlled 86% of industrial firms, and 80% of industrial production; fifty years later 40% of industrial owners were foreigners, and almost 60% were descendants of foreigners. On the role of traders see R.Jacob, Uruguay 1900-1930: Capitales e Industria, un Encuentro Difícil", CIEDUR, Montevideo, Aug, 1987, presented in VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987.

In Perú, for a survey of 106 plants analyzed by F.Durand (1800-1925) 45 were created by Italians, 13 by British, 12 by inmigrants from 'other' European countries, and 5 by Asians, mainly from Japan. From 76 persons who created the National Society of Industrialists (Sociedad Nacional de Industriales in 1896, at least 25 were Italians, 13 British and 4 Spaniards. See F.Durand, "Los Primeros Industriales y la Inmigración Extranjera en el Perú", (mimeo), presented in VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987.

For Argentine see C.Díaz Alejandro Essays on the Economic History of the Argentine Republic Yale U. Press 1970 .

The case of Chile was more complex, but merchants also played an important role. The powerful landowners admitted into their ranks newcomers and foreigners, and people who came in general from activities of lower status like commerce and mining. See G.Palma, "Growth and Structure of Chilean Manufacturing Industry from 1830 to 1935: Origins and Development of a Process of Industrialization in an Export Economy", D.Phill Thesis University of oxford. 1979, p. 207-210.

[45] He distinguishes two kinds of industrialization. One is brought under conditions of expanding income from exports; the other is 'caused' by deprivation of previously available imports (when wars or balance of payments problems were present). In the latter case are importers likely to be the main promoters of industrial enterprise; in the first case one may expect industrial opportunities to be exploited by indigenous entrepreneurship. See A.Hirschman, "The Political Economy of Import Sutstituting Industrialization in Latin America" in A Bias for Hope. Essays on Development in Latin America, Yale University Press, New Haven and London, 1971, pp.96-97.

[48] W.Dean, op.cit, pp.20-22.

[47] Some goods, such as acetylene, were too dangerous to ship; some processed food was too perishable; hardware and plumbing fixtures would require too costly an inventory. Some raw materials were easier to produce inside the country.

-Second, he had access to credit, a knowledge of the market, and channels for the distribution of the finished product[48].

-Third, trade creates incentives for savings and thrift; the risks and the rotation of capital were high, at least for the period considered[49].

-Finally, importing was very profitable, especially in highly protected markets. That was the case in Colombia during the XIX Century, and it is the case today[50]

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[48] W.Dean, op.cit, p. 20

[49] "Estos límites [perdida del capital circulante, largo período de rotación del capital] han debido ejercer una restricción al apetito natural del hombre rico por el consumo conspicuo y a mantener viva una tradición puritana muy propia para el fortalecimiento del espiritu empresarial antioqueño" A.Lopez Toro, Migración y Cambio Social en Antioquia en el Siglo XIX, Bogotá, CEDE, Universidad de los Andes, 1970, p. 28. cited by F.Botero, La Industrializacion en Antioquia. Genesis y Consolidación, 1900-1930, Medellín, Centro de Investigaciones Económicas, Universidad de Antioquia, 1984, p. 23

[50] For the XIX Century see F.Safford, The Ideal of the Practical..., p. 35. He describes how a French diplomat was astonished to discover a large landowner, leading jurist and politician, in his shop in Bogotá, selling cloth the day after resigning as Secretary of Foreign Relations. For today, Carlos Díaz Alejandro writes: "conventional wisdom in Colombia regards the profitability of large importing commercial houses as very high; in particular, harware stores seling imports are popularly considered to be 'gold' mines" C.Díaz Alejandro, Foreign Trade Regimes and Economic Development, Colombia. National Bureau of Economic Research, 1976, p.147

In Colombia, too, almost all the important shareholders in industry were importers; and the goods subsequently manufactured were similar to those previously imported[51]. In most

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[51] Some of these importers began with domestic trade. The development of the commercial houses is very complex and will merit additional research. We will mainly menction those commercial houses already working towards the end of the XIX Centurty.

All the families which ended up creating textile firms did previously import clothing: the Restrepo family in Medellín had a commercial house which imported textiles (Fernando Restrepo e Hijos) and were later on important shareholders in Textiles de Bello. The Restrepo Family also had Restrepo & Peláez.

Similar stories for Echavarrías (Rudesindo Echavarría e Hijos, Mejías (Lalinde & S.Mejía) Navarros and Olartes (Luis Olarte) which created Fabricato and Coltejer-; Medinas -Rosellón in Medellín and Tejidos Samacá in Bogotá-; Pombos in Bogotá -Alicachín-; H.Maynham and W. Halabi (Fabricato and Tejicondor). J.Mora imported cement from Denmark and was one of the founders of Cementos Argos and Cementos Nare ; R.Greiffeinstein and G.Greiffeinstein imported glass and pottery and later they were important shareholders in Vidriera de Caldas. Villas; B.Mora imported 'general goods' -rancho- and founded Cia.Industrial de Cigarrillos, one of the firms which merged later on in Coltabaco; R.Olano imported matches and founded the 'Fabrica de Fósforos Olano' ..

In some other cases the goods imported and later on produced were not the same. The Arangos imported goods and later on moved into cement; Camacho Roldan was a merchant and founded the Fábrica de Muebles Camacho Roldán; G.and D.Restrepo in Bogotá imported wine, and other goods. They were the first importers of 'cigarrillos armados' in Bogotá and later on were large shareholders in Coltabaco and in most industrial firms in the country. 'Restrepo Hermanos' was created in 1893.

The Samper family had three important commercial houses -Antonio Samper and Co; Manuel Samper & Hijos; Miguel Samper e Hijo-; the Koppels had Koppel and Co and Koppel and Schloss.

Other industrial families which had important trading houses were: Morenos, Uribes and Vélez in Medellín. The Vásquez and Angel families also had important trading houses, but their interests were much more diversified.

Frequently the sons continued in trade like their fathers. For the case of large and old established Commercial Houses Twinam finds that 77% of the sons of 'long distance' merchants had the same business as their parents. the figure increases to 80% for commerce and mining together. See A.Twinam, "Comercio y Comerciantes en Antioquia" in FAES, Los Estudios Regionales en Colombia. El Caso de Antioquia, Medellín, FAES, 1982, p.124.

cases traders later founded banks. That seems to have been the 'typical' course towards manufacture: trader-banker-manufacturer[52]. And the transition from trade to industry was not instantaneous. Traders continued their commercial activities while initiating industrial production.[53]

But, wherever there is growth, owner-managers emerge, and, where the 'typical' conditions are lacking, national variants occur. In Ecuador, for example, landowners in the Sierra installed textile plants in their Haciendas, and stop producing clothing when labour was required for agriculture[54]. Colombia, too, presented particular characteristics: foreigners were few, and mining and gold played an important role.

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[52] Trade and money lending were done simultaneously; money lending and banking are not different activities. Fifty percent of total debt repaid by the Municipality of Medellín in 1925 was paid to 11 money lenders. All of them, except Ospinas appear in our list of important shareholders in industry. See Anuario Estadístico del Municipio de Medellín, Departamento de Catastro y Estadística Municipal, Tipografía Bedout, 1925, pp.66-69. See also E.Echavarría, Historia Bancaria de Antioquia, Medellín, 1946. On the other hand, most trading houses also lend money, and that was considered one of the multiple objectives of the houses when created. See F.Botero, La Industrialización..., ch.3. There was a time when 93 municipalities in Antioquia owned money to one single person -E.Restrepo-; 10-15 years loans, with 1.25% monthly interest payments.

[53] It is no coincidence that 12 of the 24 members elected in 1932 for the Merchants Association -Cámara de Comercio- in Medellín could clearly be identified as important industrialists. See J.L.López, "Informe de la Cámara de Comercio", La Industria Nacional Colombiana, March, 1932 p. 14. The transformation from trade to industry has to be studied more carefully. In some cases like the Restrepo Family this transition was done pretty early -1910-15; in other cases it happened mainly after the crisis of 1920-21 and of the 1930's.

[54] See J.F.Belisle "La Industria Textil Ecuatoriana: Fases de Crecimiento y Orígen de los Empresarios", CEDIME, presented in VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987; the characteristics of owners-managers in Guayaquil were much more 'typical'.

European immigrants were few[55] and 'national' importers counted for more than in the 'typical' case. Those few foreigners easily entered the ranks of the elite and became industrialists themselves-particularly in Antioquia, thus confirming the general rule[56].

Gold mining has been identified by Brew as the main factor explaining the origin of the Colombian (Antioqueño) entrepreneur, and by A.López Toro and others as one of the determining elements of the Antioqueño' ethos. The literature associates the characteristics of mining (high risks, 'free' labour) with those of manufacture. Our reading of the literature, in contrast, confirms what we said in the previous paragraphs. Rather than leading directly to manufacture, the mining context was important in the creation of wealth and of a merchant class. Gold provided the kind of money needed in a very unstable environment[57],

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[55] McGreevy estimates that no more than 100 migrants came to Colombia annually in the 1880's; 200 in the 1890's and first decade of this century; 400 annually between 1902 and 1919. In the same period some 50.000 italians migrated to Brazil annually. In 1887-1936, Brazil admitted over 2'800.000 immigrants.

W.P.McGreevey, An Economic History of Colombia, 1845-1930. Cambridge University Press 1971, p. 206; F.Safford, The Ideal...; p.
In 1922 "...El saldo de norteamericanos apenas alcanza para llenar las vacantes bancarias y petroleras de esa nacionalidad y las de las empresas petroleras. El de los ingleses para las vacantes de bancos y empresas mineras; los ecuatorianos son comerciantes del departamento de narino; los alemanes mantinen un contingente apreciable al menos por su calidad, en la agricultura; los españoles, suecos e italianos son mas importantes por su numero y tambien como productores de riqueza agrícola e industrial, obreros muy deseables que presetan un gran beneficio, y los turcos, libaneses, palestinos y sirios, viajeros constantes a su pais, del cual no pueden desprenderse a pesar del exito de su comercio de tienda al menudeo" Cortazar Toledo, "A Colombia deben traerse Obreros Especializados y Agricultores Aptos" El Tiempo 1928 junio 22, p.8. The U.S. Department of State reports, for 1938: 2977 Germans, 2887 Americans, 1944 British, 1448 Italians, and 4557 Europeans from other countries. See U.S. Department of State, 'Number of Foreigners According to Nationality', Report No. 4377, June 20, 1938, National Archive, Washington.

[56] See F.Safford. The Ideal...p. 42. Among them, Crane, Kopp, Koppel, Kohn, Michelsen, Castello in Bogotá; Greiffeinstein, Maynham, Halabi in Medellín. Safford argues that foreigners had a more important impact and were more welcomed in Medellín than in Bogotá. F.Safford, The Ideal..., pp. 216 and 217.

[57] Gold did not spread to other regions because transport cost were high. In 1919, for example, Bell reports that Antioquia "is doing business with gold coin while throughout the rest of the country very little gold is seen and paper money of various kinds forms the medium of exchange. .."..."Because the fact that Antioquia has always produced large amounts of gold, with gold as the basis of

and some people accumulated wealth selling goods (food and clothing) to the mining areas in exchange for gold.[58] Furthermore, the existence of gold in Antioquia and the close links between gold and trade probably explain why Antioqueños were richer.

Coffee was of secondary importance in Medellín and few important industrial shareholders were involved[59]. The richest person concerning whom information is available in 'hijuelas' (see Appendix III) always considered coffee as 'business for the poor'[60]. Our interviews also indicate that coffee processing was marginal[61], and not even the large trade houses of Medellín considered coffee profitable:

> "I have to tell you that neither the old firm nor our own either has or will have anything to do with the coffee business. The main trading houses of the city do not trade in coffee. It is the smaller ones that go in for coffee and even when they have relatively little capital they are respected and egged on by the U.S importers who are mostly coffee roasters and by the U.S. distributors to whom they send the fruit" [62]

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exchange, all new issues of Gopvernment and bank paper currency have been looked upon with suspicion..." see U.S.Department of Commerce. Bureau of Foreign and Domestic Commerce,1921, Colombia. A Commercial and Industrial Handbook (by P.L.Bell). In 1830, when interest rates were higher than 24% in Bogotá, they were 8% in Antioquia. F.Botero, La Industrialización..., p. 19

[58] Restrepos, Londoños, Angel, B.Mora, R.Piedrahita and the Koppel (emeralds) family among others had some direct but minor involvement with mining. They moved later on to the provision of goods to the mining areas. There were very few cases of industrialists-e.g. Peláez in Antioquia- who accumulated through direct production in their own mines. Technical conditions precluded large investment in mining, and some families who accumulated money in that way lost their influence when the centre of activity moved from Santa Fé de Antioquia to Medellín. F.Botero, La Industrializacion ..., pp.35. Our view on the lower importance of minning is also held by W.P.McGreevey, An Economic History of Colombia. 1845-1930. Cambridge University Press 1971, especially p.191. He considers that mining technology was not of the kind which would produce the side effects Hagen, Ospina Vásquez, Safford and López attribute to it. The placer mines were mostly small, scatterdd operations with the largest managed and funded by Englishmen.

[59] Angel was the most important colombian coffee exporter before 1927 -when the National Federation of Coffee Growers is created-. Ospinas were not important industrial shareholders.

[60] He had similar comments on industry. B.Jaramillo, Pepe Sierra. Un Campesino Millonario.Medellín, 1947, p.

[61] A different view in M.Arango. Cafe e Industria. 1850-1930, CIE, Medellin, Carlos Valencia Editores, 1979.

[62] Letter from E.Restrepo, the owner of one of the largest Commercial Houses in Medellín, to N.V. Holland in Amsterdam, May 15, 1921. Archivo de la Casa Comercial de Fernando Restrepo. The truth seems to be a little bit more complex, however. Even the large houses tried some times with coffee -small amounts-. The Archives of the Restrepo Family, for example, show that they exported coffee in 1904

Compared to more speculative activities like land or money lending, the export of coffee was considered unprofitable. The only notable coffee exporter gave this trade up after losing important amounts of money during the crisis of 1920-21[63]. Coffee production in smallholdings in Antioquia and Caldas was even less profitable. The situation in Cundinamarca was perhaps different, particularly as regards production, since many industrial shareholders from that region owned large coffee plantations. But the land struggles of the 20's and the crisis of 1929-32 hit them hard; most of them decided to abandon coffee after the Great Depression.[64]

4. NEW OR OLD ENTREPRENEURS. HOW MUCH MONEY, HOW MUCH TIME?

According to previous authors -notably Brew- it took almost a century to form a group of dynamic industrial owners; they emerged between 1790 and 1850, quickly consolidated economic and political power[65], and had been in power for more than a century before they invested in industry. If this is true, the Colombian-Antioqueño experience would be most exceptional: it would contradict two of Schumpeter's ideas: 1. that entrepreneurs do not come from old activities (stage-coach owners do not build railroads), 2. that they come from

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and 19905 to G.Amsinck and Co. in New York. Hides were also exported some times. There were some important coffee exporters who were also industrialists -Estrada, Londoño and Correa among others-, but they were not among the largest industrial shareholders.

[63] A.Angel lost more than US$1 million, at a time when the United States paid US$25 millions as 'indemnization' for Panamá..

[64] Our data (Appendix A-3) reveals that only 7 (out of 201) of the industrial shareholders of the sample were coffee producers, and 8 were coffee exporters. Seven of the largest coffee proucers were also shareholders -5 of them from Bogotá-, but only 2 were 'large' shareholders. F.Salazar, J.Samper and Roldán Hermanos had large coffee plantations in the surroundings of Bogotá. But the larger coffee producers in 1927 and 1944 were entirely different. See R.Granados and P.Peralta, "Los Cafeteros. Quienes son y Donde están. Protagonistas, Preocupaciones. 1920-1950", Tesis de Grado, Universidad Externado de Colombia, 1986, especially pp. 39-41.

[65] Brew R, El Desarrollo ... p.35. Twinam shows a very close association between the political and economic elites in Antioquia in 1780-1810. See A.Twinam, "Comercio y Comerciantes..."

all strata of society. It would also run counter to the evidence from Europe and from other Latin American countries.[66]

Was Colombia so atypical?. Not in our view. We consider that the picture given by Brew is too static; it describes the history of one or two families at most[67], and is a priori difficult to accept for the following reasons: the economic environment was extremely unstable, the amount of capital required in the creation of industry was low compared to other activities, and the level of wealth required to be 'rich' was low relative to other Latin American countries. Even more important, our new information on shareholders is entirely consistent with these considerations.

On the first point -instability- civil war was permanent in Colombia during the XIX Century[68], and three crises hit the economy in the XX century (1904, 1920-21 and 1930s). The richest people were often badly hit and many of them went bankrupt[69], in the XIX Century investment in industry proved catastrophic, and out of 23 banks founded in Antioquia before

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[66] Pirenne argues convincingly that to everyone of the successive periods which can be distinguished in Europe economic history there corresponds a clearly distinct entrepreneurial class. In Chile the powerful landowners were very flexible in admitting into their ranks newcomers and foreigners (and people who came in general from activities of lower status like commerce and miners); in Brasil Dean gives a very rich and dynamic picture of the creation of the elite. See P.Mantoux, The Industrial Revolution in the Eighteenth Century. New York 1961; P.Bairoch, Industrial Revolution and Underdevelopment, 197; G.Palma, Growth and Structure of Chilean Manufacturing Industry from 1830 to 1935: Origins and Development of a Process of Industrialization in an Export Economy D.Phill Thesis University of oxford, p.207,210; W.Dean, The Industrialization of Sao Paulo 1880-1945, Austin & London, Institute of Latin American Studies, University of Texas Press, 1969.

[67] Restrepos and Ospinas. Ospinas were not important shareholders in industry.

[68] Major civil conflicts occurred in 1831, 1839-42, 1851, 1854, 1859-62, 1876 1885 and 1899-1903. Between 1864 and 1880 there were many localized upheavals. See F.Safford, The Ideal..., p.44. Antioquia was partially, but not totally isolated.

[69] Santamarías, Arrublas and Montoyas, Juan Francisco Martin, the richest people at the time of Independence were not important shareholders during the XX century. Montoya- was in bankruptcy in 1858 . In 1918-20 the heirs of Saenz still try to pay old debts. See R. Brew, El Desarrollo ..., p.39; P.Safford, The Ideal..., p. 238. M.Palacios, El Café en Colombia 1850-1970, Una Historia Económica, Social y Política, 2nd ed. El Colegio de México/El Ancora Editores, Bogotá, p.120; T.Machler. "La Ferrería de Pacho. Una Ventana de Aproximación" Cuadernos de Economía, v.VI:7, Universidad Nacional de Colombia 1984, pp.109-131; M.M.Botero, "Instituciones Bancarias en Antioquia, 1872-1886", Lecturas de Economía, CIE, Universidad de Antioquia, May, 1985, Table 1, p. 49.

1910 only one was still operating in 1934. Recent research for the case of Bogotá shows how very few of the large traders were able to survive the Thousand Days War of 1898-1903 , after which a 'new generation' that amassed its fortune during the conflict quickly reached political and economic power[70].

On the second element -amount of capital required for the creation of industry-, our evidence for Bogotá (Table A-2) shows that industrial investments in 1892-1933 were always minor when compared with investment in land, merchant houses, etc. Things were similar in Medellín[71].

There is not much evidence on how rich 'rich' people were. Safford reports how, in the XIX Century, 'European visitors considered the New Granadan upper class a sorry lot indeed...'[72]. The architecture in Bogotá or Medellín suggests that their elites were 'poor' compared to those of Mexico City, Lima, Santiago or Buenos Aires, and this was surely not only due to the 'catholic puritanism' shown by the Antioqueños.

Finally, our new information reinforces the arguments just presented. Of the five largest shareholders in our sample none belongs to those families who controlled economic and political power in Antioquia before 1850[73]. Additionally, many of the most important

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[70] see J.Villegas and J.Yuñis, La Guerra de los Mil Días, Carlos Valencia Editores, 1978, pp.98 and 116. Samper and López were among the few who survived. Among those ones in the 'new' generation the case of F.Salazar is important for us. He will be part of a family with important interests in industry.

[71] Coltabaco -the second largest firm in the country- had a capital of Col $1m in 1921 compared to an insured value of $1'281.614 for the group of stores belonging to P.Lalinde. Fabricato had a capital of $278400 in 1923. See Anuario Estadístico de Medellín, 19.., p.

[72] F.Safford, The Ideal..., p.38

[73] Angel, Mora, and Restrepos -from Bogotá- are not mentioned in the traditional textbooks in the field, nor do the Echavarrías correspond to the general picture "de los primeros industriales unicamente los Echavarrías fueron hombres nuevos en el mundo comercial del Siglo XIX aunque su ascenso siguio el mismo patron de mobilidad social, ..no fueron conocidos sino a mediados del siglo y no llegaron a ser prominentes en el mundo de los negocios sino desde la decada de 1880" See R.Brew , El Desarrollo..., p. It is somehow unfair to say that Restrepos of Bogotá were not considered by most textbooks since the books we have reviwed dealt mainly with the Antioqueños.

shareholders have never been included in any serious analysis of the Colombian elite[74]. Even more significant, the largest owners in 1925-29 were not the largest owners in the other sub-periods. [75].

We must conclude, then, that the process was much more fluid and 'typical' than previously considered. Side by side with the traditional families a new group of people is found in the ranks of the elite. Angel or Mora in Medellín, Restrepos, Sernas or Salazars in Bogotá did not inherit their money and quickly became important elements in society, both politically and economically.

5. SOME FURTHER PROBLEMS.

One feels when reading the literature on the colombian entrepreneur-manager-owner that many arguments are ad-hoc and that not all of them resist simple logic.

It has been suggested that a large and cohesive family was a positive factor in the creation of investment and entrepreneurship in Antioquia but the opposite has been argued for other countries, nepotism limiting change and growth76. The complete story could be a mix of both arguments: the type of family present in Antioquia facilitated the creation of the first firms when risk was the crucial factor, but that same family structure may have limited growth later on.

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[74] R.Piedrahita and C.Arango in Medellín, J.Latief, F.Salazar, and A.Serna in Bogotá, among others.

[75] The results do not change when we consider last names as a group instead of individuals. The correlation coefficient between the ranking of shareholders for the different periods is almost nil.

[76] See, for example, T.C.Cochran, "Role and Sanction in American Entrepreneurial History" in Harvard University Research Center in Entrepreneurial History, Change and the Entrepreneur, Cambridge, Harvard University.

The existence of family banks is considered another important positive factor, and Schumpeter's emphasis on credit as against savings comes to mind. But the other side of the coin should also be considered. According to Cameron[77] the close link between banks and industry was often detrimental to British business, leading to credit over-extension and the absence of limited liability.

Finally, Brew argues that the large scale instability brought about by the hyper-inflation/hyper-devaluation at the end of the Century facilitated the accumulation of financial capital and thus also future investment. This could be true. But where are the losers in this story?. But one could also argue that modern growth would have taken place even earlier if wars, instability and hyper-inflation had not existed.

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[77] R.Cameron, Banking in the Early Stages of Industrialization, New York Oxford, 1967; also, P.H.Wilken, Entrepreneurship... p.89.

C. SOME ELEMENTS IN THE EXPLANATION OF HIGH INDUSTRIAL GROWTH AFTER THE SHOCK OF THE 30'S.

Our review of the literature and our new sources of information brought us to the conclusion that, in general, we should not emphasize 'atypical' and positive characteristics of the Colombian entrepreneur in seeking to explain economic growth in tne country. Even Antioqueños, the group most closely associated with industry, behaved more as rentiers than as capitalists. How, then, do we account for the fact that (i.) After the shock of the 1930's Colombia presented the highest rate of industrial growth in Latin America; and, (ii.) a large part of that growth was related to supply factors (wages, productivity, technical change..) (see Chapter VIII).

We have already provided some partial hypotheses. Land is highly liquid and when relative prices moved in favour of industry after the shock of the 1930's, funds could easily be transferred. In this Section, however, we want to present two additional arguments.

In the first place, the lack of information characteristic of most underdeveloped countries - no financial markets available- will normally delay capital shifts to more profitable sectors. In Colombia this problem was less important due to the very high concentration of industrial ownership (industrial production was also very concentrated). Second, favourable policies were taken in favour of industrialists and this has to do with the relation between industrialists and the State.

1. CONCENTRATION OF OWNERSHIP AND PRODUCTION. THE CREATION OF NEW ORGANIZATIONS.

Schumpeter considers 'the creation of new organizations -e.g a monopoly' as an important function of the entrepreneur (function 5). This classification obscures the relation between

entrepreneurship and very long-term economic growth, but allows us to highlight one aspect of Colombian industrialists which may partially account for the very rapid growth which took place after the shock of the 1930's.

More comparative analysis is needed before any definite conclusion can be reached, but it is difficult to imagine similar experiences in other Latin American countries. Industry in Bogotá and Medellín was in the hands of very few, and less than 4 firms sistematically controlled more than 70% of national production in each sector; concentration increased even further after the shock of the 1930's. Information on relative profitability in the different sectors was therefore easy to obtain, and this facilitated resource shifts towards those sectors where profitability was higher.

In 7 out of 15 firms studied by the author the largest 10 shareholders controlled more than 65% of total ownership[78]. Equally significant, 11 persons and 11 families were among the largest shareholders[79] in 4 or more firms. This was especially marked in beer and textiles; less so in cement.

Some firms appear among the main shareholders of other firms of the same sector[80] and, less frequently, in other sectors[81]. The pattern is even more complex when we introduce the insurance companies into the scene: they were important 'shareholders' in many companies and they, in turn, were owned by some of the largest industrial firms in Medellín.[82] (The

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[78] See Appendix I.

[79] This will be the meaning of 'important' share-holder in the following paragraphs. They are mainly based in J.J.Echavarría "Concentración de la Propiedad y de la Producción de la Industria Colombiana, 1920-1950", Fedesarrollo, Bogotá, 1982, (mimeo), Table 1.

[80] Nacional de Chocolates in Noel; Argos in Cementos del Valle y Cementos Caribe; Diamante in Samper; Cervecería Libertad in Gaseosas Lux; Rosellón in Samacá and in the textile firm of Manizáles.

[81] Ingenio Manuelita in Cementos Diamante.

[82] The largest owners of Compañia Suramericana de Seguros in 1945-49 were Coltabaco, Coltejer and Cervecería Unión with similar number of shares. We only have information for Colseguros in Bogotá in

presence of banks as shareholders of some of the cement firms in Bogotá stems from different motives[83]). Not only was ownership highly concentrated, but a small number of firms controlled the market in each sector, as described in Appendix 2.

2. INDUSTRIALISTS AND THE STATE.

The 'modern' state was not an important element in the industrialization of the first industrial countries, but in the 'late-comers' the state favoured industrialists. These industrialists produced goods like steel and iron, and/or exported them; both activities are prestigious and in the 'national' interest. For the LDC's the 'benefits' of industry are not so clear. Their industries produce low quality goods of which export is unthinkable; 'beer' can not compare with iron and steel for national prestige, and therefore does not attract government subsidies or help.

If a favourable policy was wanted industrialists had to 'seize' the state, as they in fact did in Colombia. In a recent survey Colombian congressmen considered the Association of Industrialists (ANDI) as the most powerful and influential Association in the country, even more than the Federation of Coffee Growers; this is even more relevant since, according to some political analysts Associations have substituted Congress-dominated by agrarian interests- as the natural forum for deliberation[84].

1925: 'Accionistas de Medellín' owned 19116 shares compared with half of that for Pedro A.López and Vicente Samper, the two other important shareholders. Coltabaco had a 'sibsidiary' called Sociedad de Inversiones e Industrias S.A which, in turn, appears as an important shareholder in other large industries.

[83] Large projects were undertaken before the depression, and the firms had to accept the banks in their Board of Managers as the only way out of insolvency. But the banks re-sold their shares in the 40's.

[84] See H.Kline, "Interest Groups in the Colombian Congress: Group Behaviour in a Centralized, Patrimonial Political System", Journal of Interamerican Studies and World Affairs, v. 16:3, Tables 3 and 4. See also, M.Urrutia, Gremios, Política Económica y Democracia, Fondo Cultural Cafetero, Bogotá. 1983, Ch.8. See also, J.Bailey, "Pluralist and Corporatist Dimensions of Interest Representation in Colombia", in J.M.Malloy, ed. Authoritarism and Corporatism in Latin America, University of Pittsburgh Press, 1977.

The task was not an easy one, given the very tiny weight of industry in national production and labour absorption, but some factors made it easier. In particular, conflicts with other groups were not specially acute[85]. There were three mechanisms employed by the industrialists in order to push 'favourable' policies. In the first place, some of the members of industrial families were appointed directly in high bureaucratic places inside the state[86]. Second, the industrialists paid for the services of very high ranking people inside the state[87]. Finally, maybe more important, most negotiations were advanced through powerful Associations of industrialists.

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[85] There were some, of course. In 1930-35 there were some discussions with the National Federation of Coffee Growers on the issue of tariffs. If the industrialists pressed for high import tariffs the United States could reduce coffee imports. Coffee people and industrialists fought together against banks -mainly foreign- in 1930-35; debt ratios were specially high for large coffee growers in Cundinamarca. Some conflicts were also present with the FNC when this last Institution tried to establish cements plants in the coffee areas; it was considered a violation of the desirable specialization of each group.

Considerable discussions were also held between industrialists and foreign merchants on the issue of tariffs. However, the fact that many industrialists continued with their trading houses and were important traders at the time made things easier. As we said, import substitution was taking place fast and foreign merchants were not able to import foreign goods any more. They blamed the 'protectionist' tariff (See Chapter V) 'forced' by industrialists, never the exchange rate Similar conflicts occurred in that period -same reasons- between 'artisans' -showmakers-in Bogotá and foreign merchants. There was some conflict between foreign houses in the hands of recently arrived Jewish and the industrialists inside the country. The Asociación Nacional de Industriales in a letter to the press in 1934 considers it completely unfair to attack colombian industrialists because they are getting rich; profit rates were much larger in the trading houses, 90% of them in the hands of foreigners. See J. Villegas, "Recopilación de Artículos de Prensa Colombiana", dec 4, 1934. Finally, there were some quarrels between Congress and the industrialists, and in 1942 some members of Congress called for the abolition of this Institutions.

[86] This was clearly the case for Restrepos in Medellín and Samper and Salazar in Bogotá: C.E. Restrepo was President of Colombia in*. G.Restrepo was Senator in 1927, 1939 and 1947, Minister of Finances in 1936, 1941 and 1944; Minister of War in 1942; Minister of Labour in 1938; Minister of Agriculture in 1934; Major (Alcalde) in Bogotá in 1937. J.G.Restrepo Minister of Agriculture in 1950; and R.Restrepo, 'Representante' in 1919; his brother was the first president of ANDI (National Association of Industrialists) in 1944, and President of Coltabaco most of the period. C.C.Restrepo was Governor of Antioquia in 1929 and 'Designado' in 1929. Various members of the Samper family were 'Representantes', Senador, Minister of foreign Relations, among others.

If we extend the definition of 'industrialist' as those people who clearly could represent the 'antioqueños' or the industrialists, we will have that 'industrialists' put 2 out of 54 alcaldes for Bogotá; 23 out of 258 Ministers (11 out of 20 Ministers of Finances); 1 out of 23 Governors in Antioquia; 16 out of 125 senadores and 7 out of 68 representantes.

[87] C.Lleras dealt with tariff and taxes negotiations practically all the period. He was Minister of Finances in 1937 and 1941 among others. Most of the 'industrialists' negotiations in Bogotá were dealt through Lleras and Restrepo.

* 1910-1914.

Two lobbying groups were created in 1930, one in Bogotá and the other in Medellín[88]. Their immediate and explicit task was to influence tariff legislation, but other goals were added later on. Among the main areas of interest were: commercial treaties signed by Colombia -especially with the United States-, tax reforms, and labour legislation, procurement of credit; others were of secondary importance.[89]

The two Associations together grouped all the prominent firms in both cities, and other regions soon affiliated to one or the other. Industries in Barranquilla affiliated to the group in Bogotá; industries in Cali shifted their position after some conflicts with the group in Antioquia, mainly related to the 'discriminatory' tariffs in the Ferrocarril de Antioquia, the regional railroad[90]. This was also, indeed, the most important source of conflict between the two Associations. and delayed unification for more than 10 years.[91]. In 1944, the industrialists were finally represented by a single institution -ANDI-, as were other economic groups in the country:

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[88] Federación Nacional de Industriales in Bogotá; Industria Nacional Colombiana in Medellín.

[89] Among the things done in the first year were: studies on credit in Colombia; analysis of consumption taxes in the different departments; influence on the creation of an export tax on banana to help the finances of the state -banana exports were in the hands of foreign interests-. See Industria Nacional Colombiana, Monthly Report, july, 1931, Later on they included: production of statistics, analysis of consumer's demand and of production inside the country, development of 'technical' schools, etc. See "La Necesidad de Crear un Fuerte Organismo Industrial", Colombia Industrial, Aug, 1935, pp. 13-15; also, "Se Inicia la Constitución de un Fuerte organismo que Represente a los Industriales de todo el País", Editorial, Colombia Industrial, sept, 1935, pp. 5-7; "La Sociedad de Fabricantes", El Espectador, june 14, 1930, p. 1.

[90] Tariffs were different for goods send in or out of Antioquia which prevented other regions from selling in Antioquia. The conflict was specially acute for cement

[91] Important conversations for that purpose failed in 1934.A meeting called by the then President of the country, Dr.López. The minister of agriculture and the president of the Federation of Coffee Growers were present. The latter proposed that there should be a similar association for miners -independent, or under the supervision of the industrialists- J.Villegas "Resumen de Prensa", june 1, 1934, p. 137

"Se unen los obreros en sindicatos, los empleados en federaciones, los agricultores en sociedades, los profesionales en academias o institutos científicos, los productores de café en una gran corporación que vela por esa industria"[82]

In 1944 the objectives were much more explicit: some extremely general like the defence of the 'industrial principles', the promotion of friends of industry, and free enterprise; but others more specific: to advance the study of tariffs 'in order to help national labour'; to avoid fiscal regimes which run against private enterprise; and to collaborate in the design of just social laws[83].

What were the main concerns of the two Associations of industrialists?. It is difficult to summarize a period of more than 20 years, and we only have information for one of the Associations, the Industria Nacional Colombiana in Medellín. But some insight can be gained even at this level of generality. Among the list of priorities were:

Foreign tariffs and exchange control was a a permanent concern of industrialists, both in Medellín and Bogotá, specially in 1930. 1936, 1938 and 1945 (last two years for textiles). Indeed, if we had to choose one main issue of concern we would single out this one. The related commercial treaties with Japan and the United States (1935-48) were also hotly discussed.

Taxes acquired marked importance in the 40s, and the tax on 'excess profits' was always considered an attempt against free enterprise. The Associations fought the municipalities and departments when they tried to increase consumption taxes on beer and tobacco -

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[82] Acta de la Décima Sesión del Comité Consultivo de la Industria Nacional Colombiana, nov, 1936, p. 2. Merchants in Cámaras de Comercio; miners in the Asociación Colombiana de Mineros; Cattle rising in Asociación Nacional de Ganaderos; Coffee growers in Federación Nacional de Cafeteros (1927); and agriculturalist in Sociedad de Agricultores de Colombia (1871); bankers in Asociación Bancaria (1936). The Industria National disappeared in july, 1943, possibly as a pre-condition for the creation of ANDI

[83] ANDI, Asamblea General. President's Report. March, 1950.

mainly in the first part of the 30s-; or taxes on the consumption of raw materials (1932 and 1936 for cotton).

Industrialists hold a very contradictory approach towards foreign investment. Their formal declarations called more foreign investment to come into the country, and they even invited the Tropical Oil Company to form part of the Industria Nacional Colombiana in 1930. However, when the British Tobacco Company invested in Colombia in 1937 industrialists did all they could to avoid it. Maybe they wanted foreign investment in the country, but not in manufactures; maybe it was just a demagogic attitude .[94]

They considered that Foreign immigration should be allowed, but controlled in such a way that 'undesirable' elements could be excluded; foreign technicians were in permanent demand. Social laws[95] were considered an issue only after 1945 when industrialists were threatened by intense social unrest and 'the danger of revolution'. The Catholic Church was called on for help. Housing for workers became an issue in 1949 when the government decided to put money previously used for that purpose into Paz del Río, a large iron plant in the country.

It was considered essential to avoid 'ruinous' competition between firms and the Association tried to stop price wars present in the food sector -chocolate- after 1930, promoting conversations between the firms involved.

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[94] They called for popular mobilizations in the municipalities. Talks with the President, Ministers, Senators, etc.

[95] Law 6 of 1945 (see Chapter III); the creation of the Social Insurance in 1949; the prohibition of the existence of two unions inside one firm; the definition of permanent workers, etc. The issue of foreign investment caused conflicts among its members in Medellín when north American investment went into textiles in 1937[95] , and new contradictions arose during the Second World War when ANDI opposed the intention to 'nationalize' Bavaria. It was considered dangerous to allow the state to purchase shares at their nominal price.

Credit was an issue but not all the time. In 1931, for example, it was proposed that industrial firms should have access to credit provided by the Caja Agraria and Caja Colombiana de Ahorros especially designed to provide credit to agriculture.Interest rates should be lower, specially in 1931. When the government ordered firms to 'freeze' money in 1944 they fought against it.[96] Mácroeconomic policy was rarely considered. No specific statements were made on public deficits, public investments, etc, ad the few comments on the exchange rate always point to the inconveniences of devaluation [97].

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[96] They tried to avoid it initially; later on they propossed to use those funds to pay taxes, or to import raw materials and machinery

[97] Other issues were of minor importance. Participation in ILO in Geneva; the promotion of 'Ferias', often with the colaboration of SAC -Association of AGriculturalists-. On raw materials, the Industria National tried to promote cotton production in Antioquia (Dabeiba, Frontino, etc) in 1932, and tried to help the textile plants against cotton producers in 1935 when tariffs on cotton were considered by the government. When conflicts arose between its members the Association abstained itself from any participation. In 1949 some leading textile firms were already producing yarn and wanted low tariffs; the opposite happened with other firms which were behind.

D. CONCLUSIONS

This Chapter explores two main issues: first, to what extent was the Colombian entrepreneur-industrialist an additional source of economic growth?. Second, which characteristics of the Colombian entrepreneur might account for the very rapid industrial growth which followed the depression of the 1930's?.

Our review of the literature suggests that the role of the entrepreneur in the economic growth of developed countries is much less prominent than was once thought. Growth is explained by economic variables like the size of the market, trade orientation, the availability of 'appropriate' technology, etc.

In Colombia, too, the role of the entrepreneur has been exagerated: he behaved more as a rentier than as a capitalist; as in most other Latin American countries, the origin of his wealth was foreign trade; and he accumulated wealth in a relatively short period of time.

This is not precisely the picture of the entrepreneur Schumpeter was trying to convey, but it is after all what we should expect in an environment like that of Colombia in the 1930's. Investment in land does not lead towards economic growth but was ex-post more profitable and more liquid than investment in industry. The 'industrialist' in the LDC's was not concerned with the creation of new markets or technology; the markets were already there and he just had to substitute previous imports. He did not have to 'invent' new technology: compared with the classical experiences of industrialization it was extremely expensive to develop new machinery. and the technology was already available. We will show, however, that he reacted very dynamically introducing new technology when relative prices moved in favour of industry after 1930.

How was the Colombian entrepreneur to increase profits when once he had invested in industry? How guarantee that investments were made in the most profitable sub-sectors? Most of his efforts went into concentrating production still further; the share of the 4 largest firms in each sector increased dramatically during the period, particularly after the shock of the 1930's. Ownership, too, was highly concentrated and this reduced competition still further; it also provided reliable information on the most profitable sectors within industry.

The final element in our analysis is the relation between the 'modern' state and industrialists. Just after the shock of the 1930's industrialists organized themselves in two powerful Associations. Their immediate and most important objective was to obtain 'adequate' protection from foreign competition; other objectives arose later. The impact of economic policy is analyzed in other Chapters, but here there is no doubt they were successful. In a recent survey, Colombian congressmen considered the Association of Industrialists (ANDI) the most powerful and influential Association in the country, not excluding the Federation of Coffee Growers

BIBLIOGRAPHY

Bailey,J. "Pluralist and Corporatist Dimensions of Interest Representation in Colombia", in J.M.Malloy, ed. Authoritarism and Corporatism in Latin America, University of Pittsburgh Press, 1977.

Bairoch,P. Industrial Revolution and Underdevelopment, 197

Baumol,W.J. 'Entrepreneurship in Economic Theory', American Economic Review, May, 1968, supplement, pp. 64-71

Belisle,J.F. "La Industria Textil Ecuatoriana: Fases de Crecimiento y Orígen de los Empresarios", CEDIME, presented in VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987.

Beretta,A. "Desarrollo Industrial del Uruguay y Formación de un Capital en el Sector (1875-1930)", (mimeo), Centro de Estudios Latinoamericanos, Universidad de la República Montevideo, presented in VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987.

Botero,F. La Industrializacion en Antioquia. Genesis y Consolidación, 1900-1930, Medellín, Centro de Investigaciones Económicas, Universidad de Antioquia, 1984

Botero,M.M. "Instituciones Bancarias en Antioquia, 1872-1886", Lecturas de Economía, CIE, Universidad de Antioquia, May, 1985, pp. 43-147

Brew,R. *El* Desarrollo Economico de Antioquia, Bogotá, Banco de la República, 1977

Cameron,R. Banking in the Early Stages of Industrialization, New York Oxford, 1967.

Cochran,T.C. "Role and Sanction in American Entrepreneurial History" in Harvard University Research Center in Entrepreneurial History, Change and the Entrepreneur, Cambridge, Harvard University.

Dean,W. The Industrialization of Sao Paulo 1880-1945, Austin & London, Institute of Latin American Studies, University of Texas Press, 1969.

Díaz Alejandro,C. Foreign Trade Regimes and Economic Develpment, Colombia. National Bureau of Economic Research, 1976

Domar,E. 'Discussion', American Economic Review, may, 1968, supplement, pp. 93-94

Durand,F. "Los Primeros Industriales y la Inmigración Extranjera en el Perú", (mimeo), presented in VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987.

Echavarría,E. Historia Bancaria de Antioquia, Medellín, 1946

Echavarría,J.J. "Concentración de la Propiedad y de la Producción de la Industria Colombiana, 1920-1950", Fedesarrollo, Bogotá, 1982.

FAES. Los Estudios Regionales en Colombia: El Caso de Antioquia, Medellin, FAES. 1979

Gerschenkron, A. 'Discussion', American Economic Review, pp.93-, May, 1968, supplement, pp.96-98

—— Economic Backwardness in Historical Perspective. A Book of Essays; Cambridge, Massachusetts, Harvard University Press, 1962

Gómez F. and A.Puerta, Biografía Económica de las Industrias de Antioquia, Bedout, Medellín, 1945

Granados,R. and P.Peralta. "Los Cafeteros. Quienes son y Donde Estan. Protagonistas Preocupaciones. 1920-50", Tesis de Grado. Universidad Externado de Colombia. 1986.

Grizáles, "La Familia Ospina", Tesis de Grado, Departamento de Sociología, Universidad Nacional de Colombia, 1986

Hagen,E. On the Theory of Social Change, Mass, MIT Press, 1962

———, "The Transition in Colombia", in P.Kilby, Entrepreneurship and Economic Development, New York, The Free Press, 1971, pp. 191-224.

Hirschman,A. "The Political Economy of Import Sutstituting Industrialization in Latin America" in A Bias for Hope. Essays on Development in Latin America Yale University Press New Haven and London 1971

—— The Theory of Economic Development,

International Bank for Reconstruction and Development, The Basis of a Development Program for Colombia, The Johns Hopkins Press, 1950 (headed by L.Currie)

Jacob,R. Uruguay 1900-1930: Capitales e Industria, un Encuentro Difícil", CIEDUR, Montevideo, Aug, 1987, presented in VIII Simposio Internacional de Historia Económica, CLACSO, Buenos Aires, Oct, 1987.

Jaramillo,B. Pepe Sierra. Un Campesino MillonarioMedellín, 1947.

Kilby,P. Entrepreneurship and Economic Development, New York, The Free Press, 1971

Kline,H. "Interest Groups in the Colombian Congress: Group Behaviour in a Centralized, Patrimonial Political System", Journal of Interamerican Studies and World Affairs, v. 16:3,

Landes,D.S. "French Entrepreneurship and Industrial Growth in the Nineteenth Century", The Journal of Economic History, 1949, 9, pp.45-61

———, "Technological Change and Development in Western Europe, 1750-1914", in H.J. Habakkuk & M.Postan (Eds.), The Cambridge Economic History of Europe (2nd ed.), (Vol 6,I), Cambridge University Press, 1965

———, The Unbound Prometheus: Technolocigal Change and Industrial Development in Western Europe from 1750

Leibenstein,H. "Entrepreneurship and Development", American Economic Review, May, 1968, supplement, pp.72-83

Little,I.M.D, T.Scitovsky and M.Scott. Industry and Protection in Less Developed Countries. OECD.

López Toro,A. Migración y Cambio Social en Antioquia en el Siglo XIX, Bogotá, CEDE, Universidad de los Andes, 1970..

López,J.L. "Informe de la Cámara de Comercio", La Industria Nacional Colombiana, March, 1932, p. 14

Machler,T. "La Ferrería de Pacho. Una Ventana de Aproximación" Cuadernos de Economía, v. VI:7, Universidad Nacional de Colombia, 1984, pp.109-131.

Mantoux,P. The Industrial Revolution in the Eighteenth Century. New York 1961Mayor,A., Etica, Trabajo y Productividad en Antioquia, Bogotá, Ediciones Tercer Mundo, 1984

McGreevey,W.P. An Economic History of Colombia. 1845-1930. Cambridge University Press 1971

Monsalve,D. Colombia Cafetera, Barcelona, 1927

North,D.C. The Economic Growth of the United States 1790-1860, New York, 1961

Ospina Vásquez,L. Industria y Protección en Colombia, 1810-1930. Biblioteca Colombiana de Ciencias Sociales. FAES, 3d Ed, Medellín, p. 423.

Palacios,M. El Café en Colombia 1850-1970, Una Historia Económica, Social y Política, 2nd ed. El Colegio de México/El Ancora Editores, Bogotá

Palma,G. "Growth and Structure of Chilean Manufacturing Industry from 1830 to 1935: Origins and Development of a Process of Industrialization in an Export Economy", D.Phill Thesis University of oxford. 1979

Payares,Z. and J.J.Echavarría. "Análisis de la Creación de Diferentes 'empresas'" en Bogotá. 1892-1930" (mimeo), 1985.

Pirenne H,

Safford,F. Aspectos del Siglo XIX en Colombia. Medellín, Ediciones Hombre Nuevo, 1977

-------, The Ideal of the Practical. Colombia's Struggle to Form a Technical Elite, Austin & London, University of Texas Press, 1976

-------, Commerce and Enterprise in Central Colombia.

Sanz de Santamaría,C. Historia de una gran Empresa, Bogotá, 1982.

Scherer,F.M. Industrial Market Structure and Economic Performance, Rand-McNally, Chicago, 1970.

Schumpeter,J.A. Capitalism, Socialism and Democracy, New York and Evanston.

------ The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle, Cambridge, Massachusetts, Harvard University Press, 1968.

Soltow,J.H. 'The Entrepreneur in Economic History', American Economic Review, may, 1968, supplement, pp.84-91

Thorp,R. and J.Bertram. Growth and Policy in an Open Economy, London, Macmillan, 1978

Twinam,A. "Comercio y Comerciantes en Antioquia" in FAES, Los Estudios Regionales en Colombia. El Caso de Antioquia, Medell[in, FAES, 1982

------ Mineros, Comerciantes y Labradores. Las Raíces del Espíritu Empresarial en Antioquia: 1763-1810, Medellín, FAES, 1985.

U.S.Department of Commerce. Bureau of Foreign and Domestic Commerce,1921, Colombia. A Commercial and Industrial Handbook (by P.L.Bell)

Urrutia,M. "La Creación de las Condiciones Iniciales para el Desarrollo. El Café", en E.Reveiz, La Cuestión Cafetera, Universidad de los Andes

-------, Gremios, Política Económica y Democracia, Fondo Cultural Cafetero, Bogotá, 1983, Ch.8

Veblen,T.B. 'Economics and Evolution', The Place of Science in Modern Civilization, New York, 1919

Villegas,J. "Recopilación de Artículos de Prensa Colombiana" (mimeo) (DANE without date). (Note dates in references refer to the years the collection refers to).

Villegas,J. and Yuñis, La Guerra de los Mil Días,

Wilken,P.H. Entrepreneurship. A Comparative and Historical Study, Norwood, New Jersey, Ablex Publishing Corporation, 1979

APPENDIX I. ON INDUSTRIAL CONCENTRATION

In beer, one firm controlled more than 60% of the market in the 20's. This firm bought 6 firms just after the crisis of 1929-32, being one of them the second largest in the country. Two other large firms merged in Medellín.[98]. New acquisitions in 1945[99] increased concentration even further.

The whole country was divided between those few firms remaining, and the price wars which took place were on those 'frontier' regions between the divided markets. There were attempts to increase concentration even further which failed at the end[100]. The ownership of the firm was in the hands of foreigners until the Second World War when German assets were expropriated.

In tobacco, after some competition in the first decade of the century the most important firms merged in 1919[101] and formed one single and powerful company[102] in Medellín. In 1924 the firm had plants in the main 4 cities of the country and later on it created more in 3 additional cities[103]. In 1925 it bought another important firm[104] and by 1929 already controlled

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[98] In 1935 Bavaria was by far the largest firm: its assets represented more than 1/3 of total industrial assets in the country (Table 1). The complementary information in Table A-1 is relatively consistent with this figure. Table A-1 brings information on the Capital of 50 firms registered in the Bolsa de Bogotá in 1937 and 1945. The Consorcio Bavaria accounts for nearly 30% of 'Total capital' in 1945. The tendency for participation differs according to the variable we consider: it decreases when we consider 'Industrial Capital'; it increases otherwise.

[99] Cervecerías Barranquilla y Bolivar; Cervecería Nueva de Cúcuta

[100] Mainly buying firms operating in closely related sectors. Cervecería Libertad and Cervecería Unión tried to buy an important part of Gaseosas Lux in 1928 and 1934.

[101] The Compañia Industrial de Cigarrillos, created in 1909 bought La Lealtad in 1914, and originated Coltabaco.

[102] Coltabaco

[103] L.Ospina Vásquez, Industria y Protección en Colombia, 1810-1930. Biblioteca Colombiana de Ciencias Sociales. FAES, 3d Ed, Medellín, p. 423.

[104] La Novedad

60% of national production. The crisis of 1929-32 brought larger control of the market, and its participation in 1934 was 88%. After some competition with the British Tobacco Company in 1937-1941[105] Coltabaco controlled 90% or more of the national market[106].

[105] Participation declines slightly in that period. The story of the investment of the British Tobacco Company is not well known and we only have scattered information, mainly from the Minutes of the Board of Managers in Coltabaco. Constant threat was felt since the beginings of the 30's. The British Tobacco finally invested at the end of 1937 and buy Tabacalera Colombiana in Bogotá. The firm abandoned Colombia in 1941, selling all raw materials to Coltabaco, and the machinery to ex-employees of Coltabaco.

[106] Some authors have argued that concentration could have taken place before, but it was delayed by the influence of regional interests since the consumption tax on tobacco was an important revenue for most departments of the country[106]. Despite the concentration process that took place in one single firm, the tobacco sector did not grow as fast as others and that explains why Coltabaco occupied the 4th position in 1945 (size) after being the second in 1935.

TABLE 1
TOTAL ASSETS OF THE MAIN FIRMS IN OUR SAMPLE.

	Coltabaco=100		Partic.%
	1935 (1)	1945 (2)	1945 (3)
PROCESSED FOOD			
Noel	3.9	28.9	1.3
BEER AND BEVERAGES			
Bavaria	167.1	664.0	30.9
Cervereria Union	11.7	75.0	3.5
TOBACCO			
Coltabaco	100.0	176.3	8.2
TEXTILES			
Coltejer	15.2	482.6	22.4
Everfit	NA	58.1	2.7
Fabricato	25.1	256.5	11.9
Indulana	1.2	23.6	1.1
Tejicondor	6.4	98.5	4.6
CEMENT			
Cementos Argos	7.9	52.0	2.4
Cementos Diamante	35.3	92.0	4.3
Cementos Samper	35.7	43.7	3.6
Cementos del Valle	218.8	65.7	3.1

Sources:
Balance Sheets for the different firms.
Methodology.
Total Assets for 1936 for Cementos Argos in Col. (1).
Total Assets for 1946 for Noel in Col (2).
Total Assets for Coltabaco were:

1935	1945
$ 10.129.277.oo	$ 17'855.084.oo

Cement was not much used in Colombia at the beginning of the century and the little amounts employed were imported, mainly from Denmark. The creation and ownership of the Cement plants was directly related to the ownership of lands containing limestone[107]. One firm[108] in Bogotá controlled 100% of production until 1927 when a second one[109] was created in the same city. They operated as a single one and distributed all the cement through one company[110]. Even after the creation of new firms in 1935[111], 1938[112], and 1943[113] the 4 largest firms controlled 70% of national production. In 1943 and 1949 there were unsuccessful attempts to increase concentration even further[114].

Competition was strong only when a new firm was going to be created; and it was stronger between groups than between single firms[115]. Finally, confrontation was stronger in 'marginal' markets in the limit zones of the agreements: the Bogotá group did not sell in Medellín and viceversa. The National Federation of Coffee Growers was interested in the

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[107] The Samper family bought part of the old Hacienda la Calera in 1909; and the Arango family (in Medellín) owned the Hacienda La Manada, both with large limestone reserves. It seems, nevertheless, that the Sampers bought those lands partially because they were already interested in the creation of a cement plant. See C.Sanz de Santamaría, Historia de una gran Empresa, Bogotá, 1982, p. 47; A.Mayor, Etica, Trabajo y Productividad en Antioquia, Bogotá, Ediciones Tercer Mundo, 1984, p. 185.

[108] Cementos Samper

[109] Cementos Diamante

[110] Compañia Distribuidora S.A. The contract was renewed in 1938. After failures to create one single firm -see note they formed the Compañia Distribuidora de Precios in May, 1942. There were some price wars in 1943-45.

[111] Cementos Argos in Medellín

[112] Cementos del Valle

[113] Cementos Nare

[114] Attempts to merge Nare and Argos in 1943; Samper, Valle, Nare and Argos in 1945; and Diamante and Samper in 1949.

[115] The two firms in Bogotá fought against the group conformed by Argos, Cementos del Valle, and Cementos Caribe. Cementos Nare did not clearly belong to one of them it worked with the Medellín group most of the time. On the Atlantic Coast the fight was between Cementos del Caribe en Cementos Nare. Argos and Cementos del Valle shared the market of Caldas, though Argos abandoned it later on. In 1943 Cementos Samper tried to form a single block of firms to defeat the recently created Argos. In 1950 Argos, Nare. Cairo, Valle and Caribe operate as a single firm, with common distribution and prices. See J.J. Echavarría, "Concentración de la Propiedad y de la Producción de la Industria Colombiana, 1920-1950", Fedesarrollo, Bogotá, 1982, p. 16.

creation of new plants of cement in the coffee areas, but those intentions never materialized. All the cement firms were small in relative terms, and the largest in 1945[116] only accounted for 4.3% of total assets (Table 1).

In textiles, unlike the other sectors analyzed, the crisis of 1929-32 did not have especial influence on concentration; it could even have diminished since a large textile firm[117] was created in 1934. However, in the first part of the 40's the 4 largest firms controlled 77% of the national market, and the two largest more than 50% after important purchases in 1939 and 1942[118]. Several attempts were made to create one single textile company in the country but failed[119].

The picture was more dynamic in textiles than in the other sectors, however, and the firms which ended up controlling the market were not the largest in the 20's; they even changed relative position through time[120]. A firm in Barranquilla was the largest in the country until the second part of the 30's[121], and in the 20's the production by some of the firms in Bogotá

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[116] Cementos Diamante

[117] Tejicondor

[118] Fabricato bought Textiles de Bello in 1939; Coltejer bought Rosellón in 1942. There were other important purchases in the 40's. Fabricato bought Tejidos Santa Fé in 1942, Filana in 1946, Vicuña in 1946; Fabricato and Tejicondor bought Indurayón in 1947.

[119] In 1928-1931. In 1935 there were new conversations intended to merge all the textile firms in Antioquia under the name of Unión Textil Colombiana. To speed up the process, a partial merger (Coltejer, Rosellón and Textiles de Bello; then Compañia de Hilados y Tejidos de Manizales) would take place. There were also attempts which never fructified: Fabricato tried (but was not able) to buy Tejidos la Garantía in 1931; and tried mergers with Bello in 1934, Rosellón in 1945; Tejicondor in 1938 and 1939, with Tejidos Obregón and La Garantía in 1942; with Pepalfa in 1943 and with Tejicondor in 1949. Coltejer tried to buy Indulana in 1943.

[120] Fabricato was the largest firm in Antioquia after its creation in 1924, and sales and production increased faster than those of Coltejer in the 20's and 30's. It was only after 1942 that Coltejer had the largest size.

[121] In 1925, for example, total sales by Tejidos Obregón were comparable with those of Coltejer and Fabricato together.

was similar to that of the two firms in Medellín[122]. The story of the large firm in Barranquilla is not well known: it was already closed in 1950 after losing participation in the 30's and 40's. Price wars were frequent and were closely associated with technological change in the firms; this produced agreements on total investment in machinery and equipment[123]

There is no good information on other sectors, but it is also likely that concentration increased through time, not necessarily in 1929-32. In non-alcoholic beverages there were important purchases in 1944[124]. In chocolates 8 small firms merged in 1920[125]; paradoxically competition increased during the crisis of 1929-32 when agreements between producers broke[126], and increased again in 1941[127]. Firms bought cocoa together in order to force input prices down.

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[122] The size of Coltejer, Fabricato, Textiles de Bello and Rosellón in Medellín was not significantly different. Total Assets of Samacá in Bogotá or of Compañía de Hilados y Tejidos de Manizáles were larger than those of Coltejer or Fabricato in the 20's.

[123] See Chapter IV on Investment.

[124] Postobón bought Gaseosas Colombianas Ltda.

[125] The Nacionál de Chocolates was formed as the fusion of the Compañía Industrial de Chocolate y Café, the Fábrica de la América, the Fábrica de Altavista, the Fábrica de Medellín, the Fábrica de Chocolates San Bernardo; the Fábrica de Rionegro; the Fábrica de Pueblo Rico; and the Fábrica Botero.

[126] "Cancelados ya todos los acuerdos o consorcios que se habían celebrado con empresas similares en varios departamentos, llegamos a la conclusión de que la mayor armonía con los competidores se conseguía más fácilmente dentro de la libre competencia, siempre y cuando cada industrial, teniendo en cuenta los funestos resultados de la inconsulta lucha de precios, se cuidara de tomar medidas desmoralizadoras del negocio..si esto fuese así, marchamos en vía de llegar a una tácita inteligencia que nos permita estudiar conjuntamente aquellos puntos de conveniencia general para la industria, sin necesidad de exigir a empresario alguno en particular la modificación o cambio de sistemas peculiares de elaboración y ventas, detalle éste que ha motivado el insuceso de los consorcios celebrados hasta hoy". Compañia Nacional de Chocolates. Report to Shareholders. 1933.

[127] The Nacional de Chocolates becomes an important shareholder in Hipólito Restrepo and in General de Chocolates. In 1945 the capital of the largest company was 10 times that one of the second firm registered in the Bolsa de Bogotá, Chávez y Equitativa. See Table A-1. The size of Chocolates Lucker was similar.

APPENDIX II. TABLES

TABLE A-1
Size of 50 Firms Registered in the Bolsa de Bogota
1937 and 1945

	Coltabaco=100		Part.% in Total K Regist.
	1937	1945	1945
I.INDUSTRY	659.3	4144.2	78.2
Processed Food			
Chocolates			
Nacional de Chocolates	24.0	14.9	0.3
Cia.de Chaves y Equitativa	1.8	NA	
Biscuits			
Noel	NA	29.3	0.6
Flour			
Cia.Molinera de Herran	NA	6.9	0.1
Cia.Molinera de Tundama	3.6	NA	NA
Industria Harinera	11.0	12.4	0.2
Sindicato Molinero La Concordi	3.7	NA	NA
Sugar			
Central Azucarero del Valle	18.4	29.6	0.6
Ingenio Central del Tolima	NA	41.4	0.8
Ingenio Central San Antonio	18.4	12.4	0.2
Ingenio San Jose	NA	33.2	0.6
Leather and Rubber			
Cauchosol	NA	7.6	0.1
Corona	3.8	20.7	0.4
Ind.Col. de Llantas	NA	57.1	1.1
Grulla	NA	8.3	0.2
Beverages			
Postobon	NA	24.9	0.5
Industrial de Gaseosas	NA	13.3	0.3
Bavaria (Consorcio)	291.9	1460.4	27.6
Cerveceria Union	NA	34.2	0.6
Tobacco			
Coltabaco	100.0	100.0	1.9
Textiles			
Coltejer	12.0	375.6	7.1
Fabricato	17.8	136.8	2.6
Filta	NA	55.1	1.0
Fca.Textil de los Andes	NA	13.6	0.3
Indurayon	NA	141.6	2.7
La Garantia	NA	33.2	0.6
Panos Colombia	NA	12.4	0.2
Panos Vicuna-Santa Fe	NA	76.9	1.5
Pepalfa	NA	23.6	0.4
Samaca	8.3	16.6	0.3
San Jose de Suaita	8.3	7.8	0.1
Tejicondor	8.3	140.5	2.7
Tejidos de Occidente	8.3	43.0	0.8
Tejidos Obregon	8.3	23.0	0.4
Apparel			
Confecciones Colombia	NA	77.7	1.5
Confecciones Primavera	NA	24.9	0.5
Cement			
Cementos Diamante	52.7	49.7	0.9
Cementos Samper	52.1	124.3	2.3
Cementos del Valle	NA	41.3	0.8
Cementos Argos	NA	30.0	0.6
Cementos Nare	NA	60.7	1.1
Metals and Iron			
Siderurgica	NA	41.0	0.8
Paz del Rio	NA	273.9	5.2
Imusa	NA	15.2	0.3

Other.	28.4	399.3	7.5
II. OTHER SECTORS			
Avianca	29.4	79.8	1.5
Sam	NA	8.3	0.2
Scadta	11.0	NA	NA
Colseguros	18.4	29.8	0.6
Seguros Bolivar	NA	3.3	0.1
Suramericana de Seguros	NA	46.2	0.9
Others	NA	NA	NA
III.TOTALS (Col $ Thousands)	Col $ Thousands		%
Total Industrial Firms. This sample	34282	451811	70.7
Total. This Sample	37482	472003	73.9
Total Industry. Registered	35824	499992	78.2
Total Registered	78722	639049	100.0

Source: Bolsa de Bogota

TABLE A.2

LARGEST INVESTMENTS IN BOGOTA
1892-1933

NAME OF THE FIRM	CAPITAL $	Sec-tor	Year		CAPITAL $ ORO	Sec-tor	Year
I.1892-1903							
GUILLERMO TORRES Y CIA	12000000	12	1903	GUILLERMO TORRES Y CIA	12000000	12	1903
CIA EX.ESMERALDAS LA MANCHA	10000004	4	1903	CIA NACIONAL DE TRAFICO	11984000	11	1903
FRAD Y CIA	2000004	33	1903	RICARDO DEEB Y CIA.	10400000	12	1903
QUINTERO U.Y C.M.QUINTERO	1600000	12	1903	CIA EX.ESMERALDAS LA MANCHA	10000004	4	1903
SABOGAL Y CIA	920000	33	1903	BANCO NUMERO UNO	8000000	3	1903
ESTEVEZ Y CIA	880000	25	1903	BOLSA DE BOGOTA	4000000	23	1903
NA	840004	1	1903	FRAD Y CIA	2000004	33	1903
PADILLA Y CIA	800004	33	1903	GALVIS BENJUMEA Y CIA	1720000	12	1903
ARAUJO Y ROA	800000	33	1903	QUINTERO U.Y C.M.QUINTERO	1600000	12	1903
MARIANO DE TORO Y CIA	800000	12	1903	PEDRO PABLO SANCHEZ U Y CIA	1600000	11	1903
II.1904-1908							
CIA DEL VAUPES	34300015	13	1907	GUN CLUB	1.3E+08	25	1908
NA	7840015	13	1907	KIPS Y MALDONADO	88600000	20	1908
ROSA BLANCA	6144000	2	1906	PAEZ Y LOZANO	88600000	33	1908
GUERRERO VALENCIA Y CIA.	5418000	20	1904	CIA ELECTRICA Y BENEFICIO DEL	66450000	17	1908
ARBELAEZ MONTOYA Y CIA	5400005	19	1905	CIA DEL VAUPES	34300015	13	1907
CIA COOP DE LECHE	4430044	1	1908	SINDICATO MINERO DE CONDOTO	21560000	4	1907
REINA FERRO Y CIA.	3096000	13	1904	PLAZA DE TOROS DE ESPANA CIRCO	20479980	25	1906
AHORRO COMERCIAL DE BOGOTA	2547250	3	1908	CARULLA Y CIA	9352431	12	1906
AZULA Y URIBE B	2322000	19	1904	JOIVE Y CIA	8707504	12	1904
CASAS J. Y PAEZ	2048005	22	1906	CIA. DEL VAUPEZ	7840015	13	1907
III.1912-1919							
UMANA S E HIJOS	9672000	13	1915	UMANA S E HIJOS	3.8E+08	13	1915
RUBIANO HERMANOS	2395982	12	1914	RUBIANO HERMANOS	1.2E+08	12	1914
CIA ELECT.HNOS.VILLA	2232000	17	1915	RUBIANO Y VILLAVECES	70816029	12	1915
SUAREZ Y FERNANDEZ	2120000	13	1913	CIA GANADERA DE LA COSTA	63600000	13	1913
CAICEDO Y ESCALLON	1696000	33	1913	BAPTISTE Y CIA	55988505	12	1914
CAYCEDO Y ESCALLON	1696000	33	1913	PRIETO RUBIO Y CIA	42696630	13	1914
GONZALEZ Y FORERO CIA	1696000	12	1913	H NAVAS V CIA	40905000	12	1912
M.J. VIDAL Y CIA	1568800	33	1913	S.GRAJALES Y CIA	38018400	12	1915
CIA ELECT.HNOS.VILLA	1488000	17	1915	HOLLMAN Y CIA	35541779	12	1913
MONTOYA & CIA	1144800	2	1913	CIA MINERA DE LA VETA	24300000	4	1912
IV.1920-1923							
BANCO DE LA REPUBLICA	33200000	3	1923	BANCO DE LA REPUBLICA	33200000	3	1923
JUNGUITO HERMANOS	33200000	10	1923	JUNGUITO HERMANOS	33200000	10	1923
INGENIO CENTRAL SAN ANTONIO	2282000	31	1922	INGENIO CENTRAL SAN ANTONIO	2282000	31	1922
CIA COLOMBIANA DE TRANSPORTES	1520000	11	1921	CIA COLOMBIANA DE TRANSPORTES	1520000	11	1921
CIA DE TRANSPORTES TERRESTRES	663993	11	1923	CIA DE TRANSPORTES TERRESTRES	663993.4	11	1923
CIA DE CHOCOLATES SANTA FE	645480	1	1922	CIA DE CHOCOLATES SANTA FE	645480	1	1922
HOTEL RITZ	541900	25	1923	HOTEL RITZ	541900	25	1923
EMP COLOMBIANA DE CURTIDOS	512250	7	1921	EMP COLOMBIANA DE CURTIDOS	512249.6	7	1921
LEO G KOPP Y CIA	504819	33	1923	LEO G KOPP Y CIA	504819.3	33	1923
CIA MOLINERA DE LA VICTORIA	456400	22	1922	CIA MOLINERA DE LA VICTORIA	456400	22	1922
V.1924-1929							
CIA DE CONSTRUCCION	10612000	20	1929	CIA DE CONSTRUCCION	10612000	20	1929
CIA LA TRINIDAD TER.BALDIOS	2942240	20	1927	CIA DE LA TRINIDAD TERRENOS BA	2942240	20	1927
CIA DE CEM.DIAMANTE	2326560	15	1927	CIA DE CEM.DIAMANTE	2326560	15	1927
CIA CBIANA DE RUTAS AEREAS	1895000	11	1929	CIA CBIANA DE RUTAS AEREAS	1895000	11	1929
ANDRES POMBO HERMANOS	1629380	12	1924	ANDRES POMBO HERMANOS	1629380	12	1924
URBANIZ.Y CONSTRUC.BOGOTA	1589438	20	1928	URBANIZ.Y CONSTRUC.BOGOTA	1589438	20	1928
CAMACHO ROLDAN Y CIA	1585000	12	1928	CAMACHO ROLDAN Y CIA	1585000	12	1928
CIA FRUTERA COLOMBIANA	1465000	13	1926	CIA FRUTERA COLOMBIANA	1465000	13	1926
ECHEVERRY HERMANOS Y CIA	1268000	12	1928	ECHEVERRY HERMANOS Y CIA	1268000	12	1928
CIA COL. DE INMIG.Y COLONIZ.	1184000	20	1927	CIA COL. DE INMIG.Y COLONIZ.	1184000	20	1927
VI.1930-1933							
SOC URBANIZ.DE LAS MERCEDES	1169981	20	1930	SOC URBANIZ.DE LAS MERCEDES	1169981	20	1930
CIA FOSFORERA COL.S A	983100	16	1933	CIA FOSFORERA COL.S A	983100	16	1933
CIA MINAS MUZO Y COSCUEZ	935991	4	1930	CIA MINAS MUZO Y COSCUEZ	935990.6	4	1930
CARLOS VILLA Y CIA	639600	13	1931	CARLOS VILA Y CIA	639600	13	1931
CIA EXPLOTADORA DE CAL S A	575640	4	1931	CIA EXPLOTADORA DE CAL S A	575640	4	1931
A.Y A.ANGEL EXP DEL CAFE	463320	10	1930	ANIBAL Y ADOLFO ANGEL EXP DEL	463320	10	1930
URBANIZ.LA MAGDALENA	426344	20	1933	URBANIZ.LA MAGDALENA	426343.5	20	1933
FACCINI Y GARCIA	223200	1	1932	FACCINI Y GARCIA	223200	1	1932
JUAN MEDINA R Y CIA MOLINO	213200	1	1931	JUAN MEDINA R Y CIA MOLINO	213200	1	1931
FCA DE EMPAQUES CUNDINAMARCA	213200	7	1931	FCA DE EMPAQUES CUNDINAMARCA	213200	7	1931

Source: Z.Payares and J.J.Echavarría, 1983

APPENDIX III.

SOURCES OF INFORMATION.

This appendix reviews some empirical information utilized in the Chapter and will explain the main limitations of the data. We relied more heavily on interviews in such cases.

1.VARIABLES AND SOURCES

Our sample includes 534 "cases" and has the following variables and Sources:

-(1)-(4): K2529-k4045. Amount of money -current Col $- owned by a shareholder in industry for 4 different periods: 1925-29, 1930-34, 1935-39 and 1940-45. It was calculated from two sources: the participation of the shareholder in the ownership of the firm -Minutes of the Assembly of Shareholders-; and the Assets (minus liabilities) of that firm -from the Balance Sheets-. When an important shareholder failed to attend to the Assembly he normally delegated his representation; but his name still comes in the Minutes.

-(6): F#: Number of firms in which the shareholder had significant amount of shares. It gives a rough idea of industrial diversification among sectors.

-(7)-(13): SHA TO SHG. Sector in which the shareholder invests. The meaning of each number is given in Table A-2.

-(14)-(16). CSA, CSB AND CO. CSA and CSB are the city(s) in which the firms were located. A capitalist whose investment was in Bavaria and in Fabricato had number 1-Medellín- for CSA and 2-Bogotá- for CSB.

The case of CO is different, representing the city with which the capitalist should be associated. Most of the time it is the city in which he was born. In addition to Medellin (1) and Bogota(2), number (3) was added for "others", most of the time shareholders for Barranquilla or Cali.

-(17)-(20). BMA-BMD. Board of Managers of the firm; it also indicates the Sector in which the firm was located.

-(21)-(23): MT, MK, MY. Merchant Type, Capital and Year in which the business was founded. The information of MT corresponds to 1:If he was associated with foreign trade; 2.If he was associated with domestic trade; 3.No trade. The difference between 1 and 2 is not as neat as desired because the information was obtained from "Directorios Comerciales" (1894, 1903, 1908, 1916, 1922, 1928, 1932) and in most cases it is impossible to differenciate (it just says "merchant"). The information on MK and MY was obtained only for some of the merchants considered, and it is almost impossible to obtain the names of the owners of most commercial houses. .

-(22-28). COFQ and COFX: Coffee producers and exporters. Coffee Production was obtained from D.Monsalve[128] -for the end of the 1920's-, and Coffee Exports from internal documents of the Federacion Nacional de Cafeteros (1927, 1927, 1931, 1933, 1934, 1935, 1940, 1944, 1950). The values given to these variables were: 1: when the coffee producer or exporter was 'small'; 2: 'large'; 3: Does not produce or export.

[128] D.Monsalve, Colombia Cafetera, Barcelona, 1927, Ch

-(29)-(34). BB: On the creation or re-creation of new business in Bogota from information in Notarías. More than 3000 firms were analyzed. The variables of the Appendix indicate the sector of the firm in which the person was a shareholder (or an associate).[129]

(35)-(39). It brings the ranking of that particular person among the 534 considered when the capital of all activities is added (first it was deflated to bring it to $ of 1940). The main problem with the information is that until 1917 there were two kinds of money circulating. Pesos oro and pesos. Though most of the time the Registros Notariales specify very clearly which 'money' is considered, we decided to play with various alternatives: first, to assume that when not specified it was Pesos Oro; second, it was Pesos.

-(43)-(46). EGR.. The person considered was or was not a member or not of , The Federation of Coffee Growers, or SAC.

-(47)-(50). He was/was not in Parliament or Senate (1), a Minister (2), Governor (3) or None of them (4).Information was obtained from Diario Oficial.

-(51)-(61). The information from "Hijuelas" was re-grouped in the items considered in Table The year in which the person died is also indicated in Tables 2 and 3.

2. ANALYSIS OF THE EMPIRICAL EVIDENCE.

Our data includes 534 'cases', 211 of whom were shareholders in industry in 15 industrial firms: 64% of industrial shareholders were from Medellín, 27% from Bogotá, and the other

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[129] The original information from Z.Payares and J.J.Echavarría. "Análisis de la Creación de Diferentes 'empresas' en Bogotá. 1892-1930" (mimeo), 1985.

9% were 'unknown'. Shareholders were divided in 'low', 'medium' and 'large' according to their total assets in industry: 65 'large' shareholders were from Medellín, 23 from Bogotá.

Industrial shareholders were classified according to the amount of 'industrial capital' in 5 sub-periods: 1925-29, 1930-34, 1935-39, 1940-45, and 1945-49. For each sub-period they were classified as 'large', 'medium' or 'small'. All 'large' industrial shareholders were from Medellín; the only one working in Bogotá represented foreign interests in Bavaria.

More than half of the 'large' shareholders in industry in 1925-29 were simultaneously appointed to the Board of Managers of their firms; the percentage was closed to 100% in 1930-34. The percentage decreases again in the following decades, but it is still high. What this suggest is that large shareholders were simultaneously owners, managers, and 'captains of industry'. Also, as we said, the crisis of 1930-34 had important favourable effects 'forcing' owners to intervene more directly in their firms; some owners living outside the country returned to Colombia.

Only 10 out of 201 industrial shareholders appear previously as merchants; but 6 out of 16 rich industrialists do. Our direct information on trading houses is very poor, however, since it is difficult to identify their owners; our interviews are more reliable. As it is explained in the Chapter, almost all the largest industrial shareholders came from trade.

Only 7 (out of 201) of the industrial shareholders were coffee producers. . Also, the importance of both, producers and exporters, decreased through time. Seven of the largest coffee producers were also shareholders -5 of them from Bogotá-, but only 2 were 'large' shareholders. On the whole this confirms what is said on the chapter about the relative low

importance of coffee as a direct or complementary source of income for industrial shareholders[130].

Only 8 of the industrial shareholders were coffee exporters. Five shareholders -2 of them 'large'- in industry are among the 20 largest coffee exporters, with no clear trend through time. Also, most of the 'large' industrialists exporting coffee could be considered relatively small when compared with the largest exporters, most of them firms, not individuals.

Twelve large industrial shareholders from Medellín founded business in Bogotá. There is no clear pattern, however; they invested in all activities.

Only 1 of the 'large' industrial shareholders was governor in Medellín; 18 were in parliament.

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[130] The average number of trees for coffee producers in our sample is 196 thousand; the average number for 'large' shareholders was 56 thousand. Our sample is biased because it does not include the largest coffee producers in Cundinamarca -they were not industrialists-. There were some coffee farms in Cundinamarca with more than 800 thousand coffee trees. There were not as large in Antioquia, but there were some farms with 400-500 thousand trees.

LABOUR SUPPLY IN COLOMBIA. 1925-1950

CHAPTER II. LABOUR SUPPLY IN COLOMBIA. 1925-1950

I. INTRODUCTION

In this Chapter we analyse the role of workers and wages in Colombian industrial growth in 1925-1950, a period in which the supply of unskilled labour was infinite. Wages in agriculture were constant until the second part of the 60's (in the construction sector until 1950-55), and industry only required 7% of the agriculture labour force.

It seems valid, then, to ask whether capital accumulation in industry followed the lines suggested by Lewis, Fei and Ranis, and others, whereby the benefits from exogenous technological change are entirely appropriated by capitalists, and labour is taken to be unskilled. Lewis had in mind African or Asian countries, but his model should apply to the inception of industrialization anywhere.

Section A discusses some aspects of the dual model: sectors, alternative definitions of 'wages'; some tests are also proposed. Section B presents evidence which, a priori, would lead us to expect the Colombian economy to behave as a dual economy. Section C reviews the evidence on wages (mainly) and on profit's share, and concludes that even in this environment the labour market did not conform to the dual model. Neither of the two criteria proposed by Lewis was present: real product wages increased more than 3% per year -with cyclical variations-, and there is no evidence of any substantial shift in profit's share. Two variables seem to explain the rise in real product wages: labour productivity and the terms of trade food-manufactures.

Why did real product wages rise? Several explanations have been offered: difficulties on the release side in agriculture, 'inappropriate' techniques in industry, the paternalistic attitude of managers, trade union pressures and/or government legislation. We review the influence of the last two factors in Section B.3. The influence of trade unions was important. Most disputes related to the workers' standard of living; the level of conflict was especially acute in Bogotá. State legislation did not influence wages directly, but had important consequences for stability; it also influenced the capacity of workers to organize.

The above does not, however, take into account certain key factors. These have been deduced mainly from the analysis of more than 3000 worker's files. It is our belief that the notion of firms hiring unskilled workers is not valid for the Colombian economy during the period. It was a very segmented labour market, where the firms always selected the most skillful: artisans, the educated, or those already 'trained' by other firms. Once hired, those workers stayed with the firms for the rest of their working lives. Turn over costs were high, and managers 'sacrificed' profits in periods of high inflation in order to maintain morale in the labour force.

The labour force differed radically (sex, age of entry, instability) for the different sectors. The proportion of migrants was low for Medellín, high for Bogotá. But even in Bogotá the migrants had characteristics not previously aknowledged in the literature: they migrated to the cities very young, and had not previously engaged in agricultural work; the proportion of artisans is surprisingly high. Industrial workers did not come from coffee areas, and workers were not 'trained' in coffee processing in the cities before moving to modern industry, as some of the literature suggests.

Section D discusses certain limitations of the dual model, which will be further considered in later Chapters.

A. THE DUAL ECONOMY. GENERAL CONCEPTS AND DEFINITIONS.

No other theoretical construct has received so much attention in the literature of economic development and growth as the dual economy. Lewis considered that the central fact in economic development was the jump in savings (caused by income redistribution in favour of capitalists and profits) from 5% of national income to 12% or more. Constant wages corresponding to an unlimited supply of unskilled labour in the initial stages of growth facilitated this redistributive process.

-Sectors.

As a methodological proposition the economy is divided into a pre-capitalist and a capitalist sector. The capitalist hires 'free' labour with a view to profit. Capitalism in this sense does not exclude agriculture, and allows of government acting as the capitalist. In practice, however, the two sectors of the dual economy do in fact seem to be 'agriculture' and 'industry' than anything else. The pre-capitalist sector produces food which can only be used for consumption (seeds for investment are marginal), the capitalist sector produces manufactures, both for consumption and for investment.

The pre-capitalist sector uses land and labour; the capitalist sector labour and capital. Another way of putting this, which is not so restrictive, is to say that K/L ratios are much lower in the pre-capitalist sector and/or that the 'capital' used in either sector is not easy to transfer. Alternative definitions relating to the degree of commercialisation are sometimes employed.

Export Economies are seldom easy to classify into a manner consistent with the dual model, and the characteristics of coffee production present additional problems in countries such as Colombia.[1] Coffee should be included in the pre-capitalist sector if we consider the degree of free labour involved; in the 'modern' sector according to the degree of commercialisation; it presents an intermediate position between industry and agriculture if we look at labour productivity.[2]

-Wages.

We must define 'wages', since constant wages are one of the elements defining the dual economy. Lewis considers many alternative definitions[3] (sub-index m for manufactures, f for food or agriculture):

-w_m/P_f: cost of living wage -'basket'

-w_m/w_f: factoral wage.

-w_m/P_m: Product or 'cost' wage. This is the product of the 'basket' wage (w_m/P_f) and the domestic terms of trade (P_f/P_m)

-$w_m L_m/P_m Q_m$: labour share; it is the relation between w_m/P_m and labour productivity (Q_m/L_m)

[1] "Non-wage" -parcelaria- coffee production was dominant in the East of the country, and large plantations in the West. Large differences were present in the different departments of the country. See M.Arango, Cafe e Industria. 1850-1930, Medellin, CIE, Carlos Valencia Editores, specially p.160-162.

[2] Labour productivity in coffee could be 60%-100% of labour productivity in the non- agricultural economy, but higher than in agriculture. See A.Berry 'A Descriptive History of Colombian Industrial Development in the Twentieth Century', (mimeo), p. 6

[3] W.A.Lewis, "Reflections on Unlimited Labour", in L.Di Marco, , pp.85-87. The word 'wages' is not strictly correct for the agricultural sector, since what we are trying to capture is farmer's incomes. They will be generally above marginal productivity.

-Tests for the Dual Economy.

Lewis proposes two tests for the dual economy: a) w_m/P_m must be constant; b) Profit's share increases, since the benefits from technological change are captured by the owners of capital.

In time, two breaking points occur. The first comes when production per capita starts rising in the rural areas; wages will then increase in the modern sector; after this first turning point w_m/P_m will 'ultimately' rise faster than labour productivity and $w_m L_m/P_m Q_m$ will start to fall (the argument as to why is not very clear, however).

The second turning point will come when capital spreads to the whole economy, marginal productivity of labour being equal in all sectors. In this 'neoclassical' economy wages will rise with productivity and labour share will -history shows- remain constant.

-Accumulation in a Dual Economy.

Industrial profits depend on a race between product wages and industrial productivity (Q_m/L_m). Real product wages can, in turn, be expressed in terms of real 'basket' wages (w/P_f) and the commodity terms of trade(Pm/Pf). Formally:

$$\gamma \equiv \alpha/P_m Q_m = \frac{(P_m Q_m - w_m L_m)}{P_m Q_m} \equiv 1 - \frac{w_m/p_m}{Q_m/L_m} \; 1 - \frac{w_m/P_f}{\frac{P_m \; Q_m}{P_f \cdot L_m}} \quad (1)$$

where:

γ : Profits' Share
α : Total Profits
Q_m : Quantity of manufactured goods
P_m: Price of manufactured goods
P_f: Price of Food.
w_m: Nominal Unit Wage in manufactures.
L_m: Number of Workers employed in the Modern Sector

Higher profits guarantee growth in an economy in which the capitalist shows a passion for capital accumulation and automatically reinvests all profits. Things are more complicated, however, as we will see in Section B, but much of the arguments given by Lewis and others are based in this simple and tautological formulation.

The parameters of formula (1) are not always independent. Higher wages could force managers to adopt labour saving technology which, in turn, increases labour productivity. This seems to have been the case in the United States in the XIX century, and in Europe in the Post-War Period[4].

B. THE EVIDENCE ON UNLIMITED SUPPLY.

We start our analysis of the Colombian labour market by looking at the numbers involved. How many workers were required by industry in the different sub-periods? From which sectors could labour have come?. We show basically that industrial demand for labour was insignificant. In other respects, too, the Colombian economy resembled the dual model.

We then consider whether the Colombian economy possessed the two defining criteria of the dual economy. The answer is negative. At the end of the Section we inquire to what extent labour conflict and/or state legislation caused the rise in real product wages.

1. SOME POSITIVE EVIDENCE

Colombian modern industry employed an average 148 thousand workers in 1925-1950 (230 thousand workers in 1950) (Table 1) and required only 6 thousand new workers per year:

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[4] P.H Wilken, Entrepreneurship. A Comparative and Historical Study. New Jersey, Ablex Publishing Corporation, 1979; D.C. North, "Industrialization in the United States", in H.J.Habakkuk & M.Postan (Eds.), The Cambridge Economic History of Europe (2nd edn) (vol.6,II), Cambridge: University Press, 1965, p. 676; Saul S.B (Ed.), Technological Change: The United States and Britain in the nineteenth Century, London, Methuen, 1970; Kindleberger C, Europe's Postwar Growth, Cambridge, Massachusetts, 1967. Cited by W.A. Lewis, op.cit, p.93

1.5 thousand in Medellín and 1.1 thousand in Bogotá[5]. No other sector grew so fast, but its small size overall meant that almost any other sector could easily have supplied the workers required . Even in 1950 industry represented less than 7% (5% average for 1920-50) of total employment in Colombia.

Agriculture was the obvious candidate. It 'employed' more than 60% of the labour force in the period[6], and just 7% of agricultural workers were enough to satisfy annual industrial requirements. The population in the cities increased much faster than the natural rate (see below) suggesting significant migration from the rural areas, and there is evidence of factors contributing to release labour from agriculture: 'ties' to the land decreased[7] and the absolute number of people employed in agriculture remained stagnant.

There were other sectors which could potentially have released labour for industry. In 1925 there were twice as many artisans as workers in manufacturing; the ratio decreased but was still high in 1950. Construction and Commerce together provided 50% more employment than modern industry. Finally, coffee processing (Trilladoras) employed as

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[5] Modern manufactures created 146 thousand new jobs in 1925-1950. Table A.1 shows that Antioquia and Cundinamarca together employed 46% of the total labour force in industry, Antioquia being relatively more important. In this chapter we will refer broadly to industry when we consider modern industry or manufactures. When we include "crafts" we will say it explicitly.

[6] This seem to be permanent workers but the figures from ECLA are not clear enough on this particular and important issue. Coffee employed 80 thousand permanent workers in 1914; 240 thousands during the coffee crop. J.A.Bejarano, El Regimen Agrario. De la Economia Exportadora a la Economia Industrial. Bogota, La Carreta, 1979, p.

[7] The importance of 'free' labour (jornaleros) in the rural areas increased markedly in 1912-1938. It respresented 14% of 'active' population in the first year, more than 26% in the second. Among the important causes of this were: 'Enclousers' by landlords were considerable during the 20s and especially toward 1929. They had special importance in the Cauca Valley, but were also present in Antioquia and Cundinamarca. The impact of the enclosures during the 20s semms to have been larger than the introduction of labour saving techniques, a process that only started towards the second part of the 40s. Another relevant factor was the proletarization of labour as an (unintended) effect of law 200 of 1936. See M.Arango, Café e Industria, Carlos Valencia Editores,Medellín,1979, p. 83 and 106; S.Kalmanovitz. Desarrollo de la Agricultura en Colombia, Editorial la Carreta, Medellín, 1978, p.22. ; D.Fajardo, Haciendas, Campesinos y Políticas Agrarias en Colombia, 1920-1980, Editorial Oveja Negra, Bogotá, pp. 51-58

many workers as 'modern' industry in Medellín in 1929[8], and it sounds plausible, as some authors argue, that this last sub-sector provided the training for labour in modern industry[9].

[8] Memoria de Gobierno, Imprenta Oficial, Medellín, 1929, pp.104-105.

[9] M.Arango, Cafe we Industria. 1850-1930, CIE, Medellin, Carlos Valencia Editores, 1979

TABLE I

EMPLOYMENT IN DIFFERENT ECONOMIC SECTORS.
COLOMBIA. 1925-50

I.ABSOLUTE NUMBERS ('000s)

	Total	Agricul-ture	Minning		Industry		Construc-tion	Others				
			P.	A.	M.	A		Total	Trans port	Comm erce	Gover nment	Servi ces
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
I. TOTAL EMPLOYMENT. (Average 1925-1950)												
Thousands	3196	2012	17	50	148	236	76	658	80	187	84	379
%	100.0	62.9	0.5	1.6	4.6	7.4	2.4	20.6	2.5	5.9	2.6	11.9
II. ANNUAL GROWTH (%)												
1925-30	1.8	1.1	8.4	8.4	5.8	-0.1	0.9	4.0				
1930-35	2.1	1.5	2.5	2.9	3.1	1.8	7.2	3.2				
1935-40	1.9	1.3	2.2	1.9	3.2	1.9	5.8	3.2				
1940-45	1.8	0.9	1.0	0.0	3.8	2.4	2.1	3.5	3.7	3.7	1.4	3.8
1945-50	1.4	0.1	0.0	1.0	4.3	3.3	3.7	3.2	3.7	3.7	6.2	2.1
1925-50	1.8	1.0	2.8	2.8	4.0	1.8	3.9	3.4				
III. ANNUAL ABSOLUTE VARIATION (Thousands).												
1925-30	238	97	5	15	28	-1	2	92				
1930-35	295	142	2	7	19	18	20	87				
1935-40	305	130	2	5	23	21	22	102				
1940-45	304	100	1	0	32	30	10	131	15	35	6	75
1945-50	269	16	0	3	44	46	20	140	18	42	31	49
1925-50	1411	485	10	30	146	114	74	552				

Sources:
ECLA. El Desarrollo Económico de Colombia. 1956.
Anexo

Focusing now on the population of Bogota and Medellín (Table 2), it is also clear that the "surplus" of labour was substantial. The population of Bogotá increased by 18 thousand per year, and that of Medellín by 10 thousand. Both figures were much higher than the 1.1 and 1.5 thousand new jobs offered by industry. Population in those cities doubled every 25 years; industrial employment every 15 years. Within industry Food (20.0%) and Textiles (20.0%) provided 40% of total jobs[10] (Table A-1), textiles counting for a much higher proportion in Medellín than in Bogotá.

[10] Apparel (7%) was the only other sector employing more than 5% of the labour force.

TABLE 2
POPULATION GROWTH IN COLOMBIA. 1905-51
MUNICIPALITIES

	1905-12	1912-18	1918-28	1928-38	1938-51
I.ANNUAL GROWTH RATE (%)					
BOGOTA	2.8	2.9	5.0	3.4	5.2
MEDELLIN	3.7	1.8	4.3	3.4	6.0
OTHER 17 MUN.	2.2	4.5	6.4	0.8	4.3
TOTAL	2.5	3.9	5.9	1.6	4.7
II.ABSOLUTE VARIATION PER YEAR (persons)					
BOGOTA	3037	3790	9143	9489	24001
MEDELLIN	2298	1357	4090	4822	14609
OTHER 17 MUNI	7939	19796	43756	8232	58070
TOTAL	13274	24943	56988	22543	96680

Sources:
McGreevey, 1971, Table 15 and author's calculations
Methodology:
Exponential growth rates in all cases

Not only was the supply of labour unlimited compared with the very limited demand from the industrial sector, but all evidence seems to validate the hypothesis that the population lived near subsistence level as in the 'text-book' explanation of the dual economy. Food and housing represented 85% of worker's expenditure[11], and in 1912 an English diplomat described the life style of the working-class in Bogotá as follows:

> "The working classes live in conditions which compare unfavourably with those of the African tribes, with the further disadvantage that the existence of a degree of semi-civilization implies. They live at subsistence level, and any abnormal event can lead to death by starvation. Begging is a profession which is not confined to the poorest classes, and only recently have any measures been taken to curb the plague of beggars and sick people who seek to eke out their painful existences by exhibiting horrible deformities..."..."The middle classes too live a life of poverty similar to that of the low classes".[12]

[11] Food, 60%; Housing, 23% (includying fuel); tobacco and beverages, 8%; clothing, 1%. See L.B.Ortíz, "La Vida Obrera en Bogotá", El Més Financiero y Económico, April, 1938.

[12] UK Foreign Office, Document FO/371/1350. 1912.

Other empirical features traditionally assumed in dual models were clearly present in Colombia at the time: basket wages in agriculture and in construction remained constant throughout the whole period (in agriculture until 1968, in construction until 1950-55)[13], and

wage differentials between rural and urban areas were very large[14], partially explaining the large migration to the cities.[15]

2. TWO TESTS SUGGESTED BY LEWIS.

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[13] A.Berry, "Real Wages...", pp.1,31; A.Berry, The Development of Colombian Agriculture (mimeo) Yale University 1970, chapter 6.

[14] Some of the most reliable figures consider a differential of 65%. A worker in a coffee plantation earned Col$0.50 working 10 hours a day; a 'laborer' in the construction sector in Bogotá earned Col$0.65 working 8 hours a day. This last wage should be close to that one in the 'unprotected' sector in the cities. See U.S. Department of State, National Archive, Washington, June 22, 1944. The figures given by Thorp and Londoño are more difficult to interpret. A worker in the agricultural-non-coffee sector will earn half of that one in the coffee sector; this is consistent with our previous information)s, suggesting that wages in coffee were much higher than in the rest of the agricultural sector. However, their figures also indicate that wages were higher in the coffee areas than in the informal sector in the city (0.81 for coffee piece-rate in the rural sector; 0.45 for a 'peón' in a coffee mill in the city). See R.Thorp and C.Londoño, "The Effect of the Great Depression on the Economies of Perú and Colombia", in R.Thorp, ed. Latin America in the 1930's. The Role of the Periphery in World Crisis, St.Antony's/Mcmillan Series, Oxford, 1984, Table 4.6, p.107.

But indirect information can also be provided to prove that differentials were large. First, wages in public works were comparable to those in building activities in the city and the large coffee growers in Cundinamarca bitterly complained about the government stealing their workers in the 1920's. Second, when unemployment in the cities was at its worst in 1931-32, the government, the FNC (Coffee Federation) and large landowners were unable to convince workers to 'return' to the coffee plantations. See J.Villegas, Recopilacion de Articulos de El Tiempo, DANE (no date). January 17, 1930.

[15] R.Junguito estimates that population increased in Colombia by 3.5% in 1925-1950, compared with 5% in the cities (Table 2). See R.Junguito, "Population in Colombia", in M.Urrutia, La Economía Colombiana en el Año 2000 Fedesarrollo, 1980

There is and enless controversy on the importance of expulsion (as oppossed to attraction) of peasants to the cities, particularly in the 20's and 30's. Also, on the effects of Law 200 of 1936. Some arguments could be given as to why attraction was more important than 'expulsion'. First, it is not clear that those peasants pushed out of their land necessarily migrated to the cities. Large coffee producers in Cundinamarca permanently complained about the lack of workers, and coffee production increased markedly as a consequence of lower prices after the shock of the 1930's. It is not entirely unlikely that a peasant went to work in another coffee 'hacienda' when pushed out of their plot. Law 200 of 1936 had important effects but it is doubtful that its influence was massive. Hirshman shows that expulsion from haciendas' occurred, but it was not significant enough as to be registered in the press at the time (quoted by S.Kalmanovitz, Desarrollo de la Agricultura en Colombia, Editorial la Carreta, 1978, p.23).

Most of the features described above for the Colombian economy correspond very closely to those of the dual economy. In these conditions we should expect: i.real product wages to remain constant; ii. Profit's share to increase.

Graph 1 and Table 2 present the evolution of nominal and real wages in Colombia in 1923-50, for a sample collected in some of the large firms in cement, tobacco and textiles.[16] Two alternative definitions of real wages were utilized: basket $w_b = (w/P_f)$ and product -or cost- $w_p = (w/P_m)$, where $G_{wp} = G_{wb} + G_{tt}$, G indicating the growth rate of each variable, wp and wb, product and basket wages, tt, terms of trade. We are mainly interested in real product wages, but we also present prices for food and manufactures, nominal and real basket wages.

It is immediately clear that real product wages did not remain constant. They increased 77% in textiles and 62% in tobacco over the whole period 1925-45 (3.1% and 2.6% per year). Our limited information suggests that two variables played an important role in the determination of product wages: terms of trade food-manufactures, and labour productivity.[17] The results

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[16] Our sample for industry includes 525 workers in textiles(366), cement(119) and tobacco(40)[16]. A Paashe Price/Wage) index was produced for each firm. Our categories represent nearly 50% of total wage earners in the largest tobacco plant in the country, nearly 70% in one of the the three largest textile plants, and nearly 30% in a large cement plant. Also, they are always the most important categories for each plant. 'Per-piece' workers were numerous in textiles, and -less- in tobacco (we do not have information on their numbers for beer, food and cement) but that could be even convenient for our purposes since we are not interested in the most qualified workers.'Per-piece' workers were not present in Fabricato in 1923 -when the firm was created-, represented 32% (average) of the total labour force in 1929-33, 23% in 1935-37, and 28% in 1938-40. We know from interviews with old managers in the plants that most workers wanted to be paid by piece, but only the most qualified were allowed to go into that category. The system was extended to most workers in the first part of the 50s.

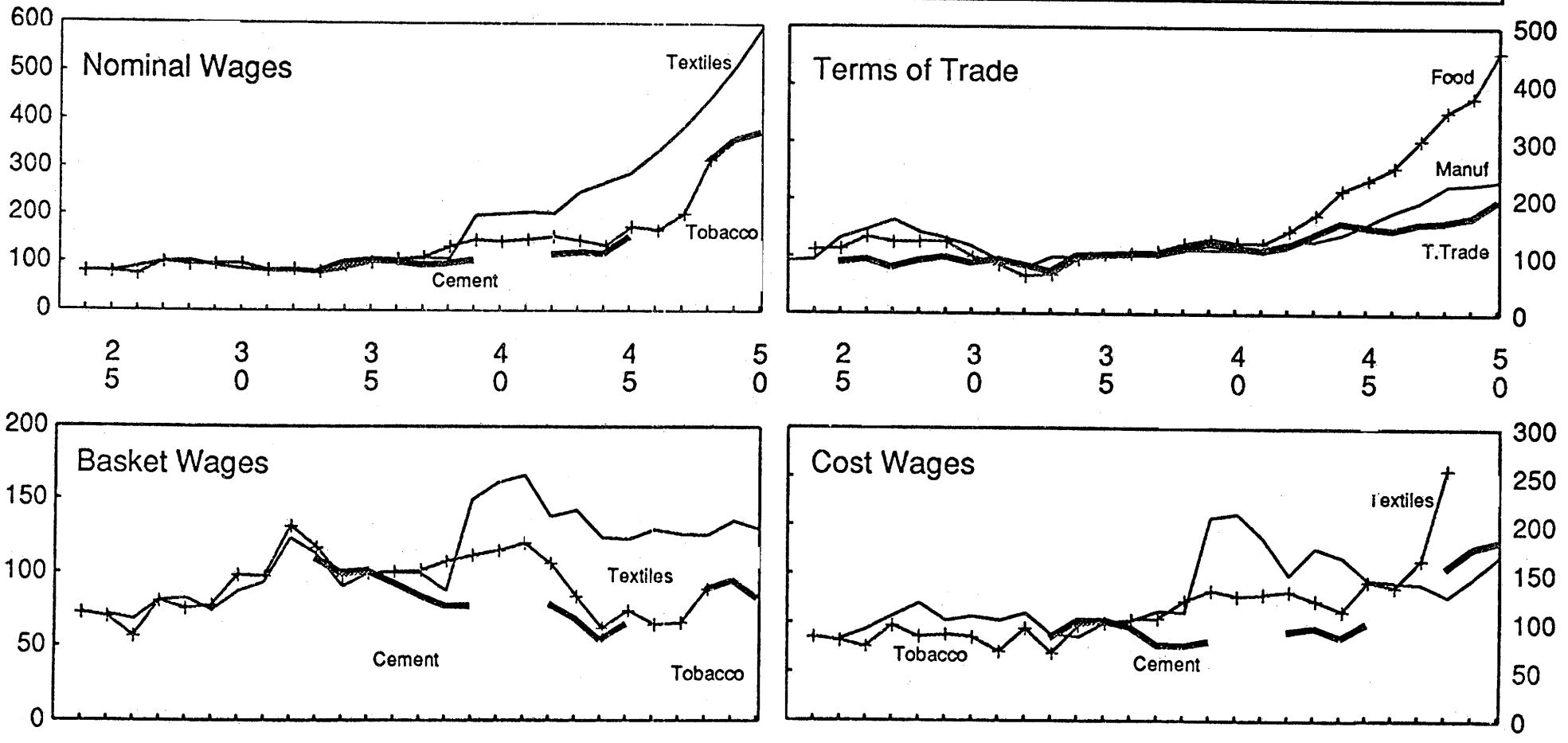
[17] There is not enough information to construct an econometric model of wage determination; variables such as the level of unemployment are available in Colombia from 1962 onwards, and statistics on strikes (or a proxy for conflict) or the stock of capital are dificult to obtain.

Other variables seem to be involved in the explanation of wages. Berry, for example, argues that(in 1958) the 'size of the firm' explains more than 'the sector'. The author suggests that this is related to larger skills required by the large firms. He also accepts the results results from a paper by Francisco Ortega, according to which wages for each category were mainly determined by such variables as skills and productivity. Within each category, however, customs, management preferences, unions, etc, played a large role. See A.Berry, "Real Wage Trends in Colombian Manufacturing and. Construction during the XX Century", Research Report No. 7403, Department of Economics, University of Western

GRAPH 1

1

INDUSTRIAL WAGES AND DOMESTIC TERMS OF TRADE
Colombia. 1920-1950



Source: Table

of the second part of Table 3 indicate that seventy percent of changes in the terms of trade, and fifty percent of changes in labour productivity were translated into real product wages in the case of textiles. The influence of both variables is still significant (and the signs are similar) for tobacco, though the results are not so reliable since we used a trend variable as a proxy for labour productivity[18]. We must also say, however, that 30% of the variations in product wages remain unexplained[19]

In textiles, the terms of trade did not deteriorate between 1925 and 1945, and the increase in product wages can be explained in terms of changes in labour productivity[20]; the standard of living of workers increased markedly. In tobacco, on the other hand, rises in product wages were mainly due to changes in the terms of trade. The standard of living of workers remained stagnant.

There were important cyclical variations. Product wages increased in the 20's and second part of the 30's, decreased after the shock of the 30's and remained fairly constant during the 40's; the variations were more abrupt in the case of textiles.

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[18] Labour productivity in manufactures increased 0.2% per year in 1926-30; 2.7% in 1930-40; and 2.7% in 1940-50. Those figures are very different from those for textiles. However, if they represent sectors like tobacco, it seems correct to use a trend variable as a proxi for productivity. See A.Berry, 'A Descriptive History of Colombian Industrial Development in the Twentieth Century', (mimeo), without date, Table 1., p.8

[19] Lagged wages, and lagged independent variables were tried unsuccessfully.

[20] Specially marked in 1931-35 and 1937-45. The results are highly sensible to the particular sub-periods chosen. On average, however, labour productivity in textiles grew at more than 3.5% a year between 1931 and 1945

TABLE 3
INDUSTRIAL REAL WAGES AND TERMS OF TRADE. COLOMBIA 1925-1950
Variation % for Different Periods

I. WAGES, TERMS OF TRADE AND PRODUCTIVITY.

	TERMS OF TRADE Pf/Pm			REAL WAGES						Q/L
				Basket			Product			
	Cement	Textil	Tobacco	C.	Te.	To.	C.	Te.	To.	Textil
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(1)
25 -28	-0.9	7.7	-0.8	NA	4.9	2.6	NA	13.0	1.7	NA
27/28-33/34	10.3	-7.6	-6.3	NA	3.7	5.4	NA	-4.4	-1.6	2.0
33/34-37/38	1.3	6.7	6.4	-5.2	-1.7	-0.5	-3.9	5.0	6.4	2.9
38/39-44/45	7.4	-0.7	8.2	-4.3	0.6	-7.6	2.8	-0.3	0.0	6.9
25/26-44/45 *(per year)	5.5	0.0	2.1	NA	3.0	0.4	NA	3.1	2.6	5.8[a/]
Total	176.6	0.3	49.6	NA	76.2	7.6	NA	77.2	62.5	119.9[a/]

II. FACTORS BEHIND THE EVOLUTION OF PRODUCT WAGES.

Factors Behind the Evolution of Product Wages (W/Pm)

W/P_m vs	Const	Q/L	t	Pf/Pm	R^2		DW
Textiles	-0.91	0.5*		0.72*	0.69	0.15	1.17
	-0.75**	0.47	0.71** →	0.73* →	0.14 →	1.87 →	
Tobacco	-270.09***		36.06**	0.38*	0.78	0.14	1.39
	115.66		15.53**	0.59	0.78	0.14	1.78

a/: 1927/28-1944/45
P_f: Price of Food; P_i: Price of Textiles or Tobacco; t: trend variable
*: significant at 1% (or DW corrected by Cochran-Orcut); **: signicant at 10%
Source: Table A-3
Methodology.
Log-log regressions in all cases

We must conclude, then, that the Colombian economy does not meet Lewis' first criterion. Real product wages increased fairly steadily. Neither of the two possible explanations for this is consistent with the dual model, and the second is radically incompatible with it. According to the first explanation real basket wages remained fairly constant (as predicted by the dual model), but the terms of trade moved against industry. According to the second, the dual model is simply irrelevant; wages were determined by supply and demand as in the neo-classical model.

The second test Lewis proposes is related to factor's share. In the 'typical' dual economy profits' share increase because owners capture all the increases in labour productivity.[21] Figures on factor's shares are much more unreliable than those on real wages, but the limited information we have suggests that this was not the case in Colombia. Profit's share increased in textiles, but only slightly, and it remained stable (or even decreased) in tobacco (see Chapter IV).

3. CONFLICT AND THE INFLUENCE OF STATE LEGISLATION.

Our analysis of conflict in the different firms allows us to understand why the evolution of the price of food had important consequences on wages in the firms. Most conflicts originated because wages were not keeping up with the cost of living and managers eventually accepted that the standard of living of workers should not fall. The direct impact of state legislation on wages was negligible, though one could argue that it had some effect when favouring the conformation of trade unions in the firms.

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[21] Ultimately, when wages start to rise in the rural areas, labour share will rise. But that does not concern us here; wages in agriculture did not start rising in Colombia until the 70s.

Relative to other Latin American countries labour conflict in Colombia was not intense and started much later. Before 1914 strikes were rare. In the 1920's violent strikes, led by socialists and communists, occurred in the transport and enclave sectors. With the advent of the first López administration, the workers felt for the first time that the government was not hostile to the labour movement, and disputes proliferated. Conflict became more violent in 1945/49.[22] The traditional parties were left on the sidelines.

Conflict in industry was less intense than in other sectors, though the level of conflict was much higher in Bogotá than in Medellín. Most disputes in Medellín originated in demands for higher wages. These demands arose mainly because wages were not keeping up with the cost of living; they were not related to increases in productivity or profits. Managers eventually accepted that the workers' living standards should not fall[23].

The same issue underlay most of the disputes in Bogotá,[24] though the level of conflict was much higher[25]. Other more general issues were also at stake. Industrial workers frequently

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[22] See M.Urrutia. Historia del Sindicalismo en Colombia, Editorial La Carreta, 1976; I.Tórres Giraldo, Los Inconformes. Historia de la Rebeldía de las Masas en Colombia, Editorial Márgen Izquierdo, Vol 5; A.Tirado, "Colombia. Siglo y Medio de Bipartidismo", Colombia Hoy, Siglo XXI Eds, 1980; and different papers by M.Archila.

[23] After the strike in 1935 and 1936 in Rosellón and Coltejer managers finally accepted average wage increases close to 25% (35% for some workers). There were always, of course, additional reasons involved in the conflicts. The main reasons for the strike in Textiles de Bello in 1920 were the long working day (11 hours) and the lower wages earned by women compared to men. The strike was leaded by women. Other arguments for the strike were the level of promiscuity and arbitrary fines imposed by managers. Some strikes at the beginning of the 30's were related to the introduction of new machinery and the implications of wages per-piece; strikes in Coltejer and Rosellón in 1935 and 1936 occurred because wages were lower there than in other firms in the same sector; workers also demand higher stability, higher salary when working at night, and higher wages for 'aprendices'. A strike in Tejicondor in 1943

These comments are derived from the Minutes of the Boards of Managers. See also A.Mayor, Etica, Trabajo y Productividad, p. 258, 286. New strikes happened in Coltejer in 1945.

[24] Urrutia considers that, in general, this was the most important cause for strikes in the country. The level of affiliation to trade unions increased in periods of inflation. See M.Urrutia, op.cit, p.115, 252.

[25] Strikes in textiles in 1934 and 1945; in beer in 1938 and 1939, 1941, 1944; in glass in 1936 and 1943, 1945; in cement in 1941, and 1946 and 1947; in tobacco in 1937.

downed tools in solidarity with strikes in other sectors[26], and workers in Bavaria even asked for participation in the direction of the firm (1944), something management considered inadmissible. In 1944 workers in Bavaria participated in the continent-wide strike (paro cívico continental). Nothing of the sort occurred in Medellín.

Legislation had little impact on wages. Minimum wage legislation was introduced only in 1945 at a level lower than that paid by the large firms[27], fringe benefits required by Law represented less than 10% of total wages in the 1950's. One could only argue that the legitimation favourable to unions may have indirectly affected wages[28] (see above). Legislation had other important consequences which did not affect wages directly[29]

C. OTHER CHARACTERISTICS OF THE LABOUR FORCE IN INDUSTRY.

Why, when the supply of unskilled labour to industry was virtually unlimited, did product (and basket in textiles) wages increase?. How was labour productivity captured by workers? In this section we analyze the characteristics of the industrial labour force. The results throw light on certain of our previous findings. Our information derives from more than 3000 files

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[26] In 1919 and 1924 most plants in textiles, beer, flour and iron stop in support of the strikes in the transport sector See M.Urrutia, op.cit, p.90, El Tiempo, 1924, nov 7, p.1.

[27] That is clear in the Minutes of the Board of Managers. The State even allowed firms like Fabricato to continue with its own 'social security' system after the reforms were introduced because the benefits were higher than those required by law.

[28] Workers could organize in unions only after 1931. The right to strike was decreed in 1919.

[29] Most important reforms were introduced only in 1945 (Law 6). Even in 1918 it was considered that the only right the worker had was the right to abandon his work if he wanted. Legislation decreed the sunday break in 1926, the 8 hours working day, paid vacations and overtime payment in 1934; maternity leave in 1938. Social reforms were adopted much later than in countries like Chile, Argentine, some countries in Central America or Uruguay. Most other countries introduced 'advanced' social legislation in the second part of the 1920's. As to the level of protection of workers, Colombia was in an intermediate position in Latin America even after the important reforms of the first López government. See "National Legislation on Hours of Work in Latin American Countries", Monthly Labour Review, Nov, 1936, p.1243-1251.

from textile, beer, cement, and tobacco companies[30]. The results are presented in Table 4 (see also Tables A.4-A.6).

In the period 1925-1950 Colombian firms did not generally hire unskilled workers. It was a very segmented labour market, and the firms preferred artisans, the educated, and those who had already been trained by other firms. In textiles most workers were trained by the firm[31]. The worker then stayed with the firm for the rest of his working life. Turnover costs (machinery broken by inexperienced workers, costs involved in hiring 'adequate' new workers, etc) were considered high.

In this scenario, it is not difficult to understand why real wages increased: if the firm wanted additional (skilled) workers, it had to pay higher wages. Firms competed for skilled labour, and sacrificed profits to prevent workers from leaving, particularly when inflation was high. Supply and demand affected real wages.

Other significant insights arise from our information. In the first place, the importance of migrants is low for Medellín, high for Bogotá. In Bogotá migrants did not come from coffee areas, nor had they worked in agriculture (most of them were artisans, or had worked in mining; some, however, had worked in 'cattle' areas).

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[30] The firms considered were:

Textiles (1301 workers): Fabricato, Coltejer, Tejidos de Bello and Rosellon.

Tobacco (314 workers): Coltabaco (Bogotá-122 workers- and Medellín-192 workers)

Beer: Bavaria (1000 workers). Includes Germania and Talleres Fenicia.

Cement: (651 workers) Cementos Samper

Industrial production was so concentrated that we can be sure our firms were representative of each sector. Files were roughly equally distributed between Bogota and Medellin. We only have one sector, Tobacco, for which comparisons between Bogota and Medellin can be established.

[31] There were frequent disputes among the firms when some of them tried to hire labour already trained by others, and emigration to Venezuela in the 1940's was highly resented in the textile sector

Second, the migrant industrial worker was not trained in coffee processing; he did not work in this sector. Workers were rained by other firms[32], or by the same firm in the case of textiles.

Third, the labour force was highly heterogeneous, with important differences between sub-sectors. Workers in textiles were chiefly single women[33] under 24 (25% under 15) on entering the firm. In beer, by contrast, married male workers entered the firms much older[34]. In Bogotá and Medellín the tobacco labour force was homogeneous; differences in labour are attributable to sector not region.

The characteristics of the labour force in each sector partially explains sectoral wage differentials. In textiles, for example, high literacy should have implied high wages; but this was counteracted by sex composition and age. Beer and tobacco paid the highest wages in the country. Cement (non-metallic minerals), textiles and food paid relatively low wages. The worst wages within 'industry' were paid by coffee processing (trilladoras)[35].

Sectoral differences may also explain why the level of conflict was so high in Bogotá. The large participation of young women in the textile sector has been given as an explanation by

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[32] F.Botero argues that not even coffee processing plants in the cities hired labour coming from the rural areas. This is something that has to be studied more carefully. See F.Botero, La Industrializacion en Antioquia. Genesis y Consolidación, 1900-1930, Medellín, Centro de Investigaciones Económicas, Universidad de Antioquia, 1984, p. We do not have much information on the caracteristics of those firms which trained the workers. A.Mayor, for example, argues that food processing could have been important. See A.Mayor, Etica, Trabajo y Productividad en Antioquia. Ediciones Tercer Mundo, 1984, p.255:

[33] Pregnant women had to leave the firms. That was part of the 'implicit' contract stablished with the managers.

[34] The information provided reveals, however, that those workers hired in Bogotá before 1930 presented similar caracteristics to those hired in the textile sector in the whole period. Thus, most women hired by Bavaria in Bogotá were hired before the 1930's. They were born in Bogotá and were single. It is clear, also, that those workers hired before 1930 presented lower degrees of literacy and their jobs were more unstable than the average for the same firm.

[35] On average, transport paid higher wages than any other sector (Table A3.b), followed in decreasing order by manufactures, commerce, and artisans; then came the lowest ranks in the 'formal' sector (peones). See L.B. Ortíz, 'La Vida Obrera en Bogotá', El Más Financiero y Económico, April, 1933, p.50.

Urrutia[36]. One could also argue that the higher the proportion of migrants, the more likely it was that rural levels of conflict be carried over into the city. Other factors were involved: wages increased much faster in the textile sector (see Section A.1.c). The centre of the textile industry was Medellín, where the Catholic Church was in any case unusually influential.[37]

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[36] M.Urrutia, Historia del Sindicalismo Colombiano, Editorial la Carreta, 1976, p.79

[37] On the level of conflict in the rural areas see D.Fajardo, Haciendas, Campesinos y Políticas Agrarias en Colomubia. 1920-1980, Editorial la Oveja Negra, 1976, Chapter II, and the extense bibligraphy given by the author on the topic. It is no coincidece that one of the important leaders of the Communist Party, directly involved in some of the agrarian struggles, was also a worker in Bavaria. See 'Datos para la Historia Social, Economica y del Movimiento Agrario de Viota y del Tequendama', Estudios Marxistas . A.Mayor argues convincingly that the large influence of the Catholic Church in Antioquia, both on managers and on workers, was an important factor in reducing conflict. We entirely agree, with one minor caveat, since Antioqueños were also in control of industry in Bogotá. (See Chapter II). There was not a single strike in tobacco in Medellín in the whole period of analysis; strong conflicts in 1937 in Bogotá in the same firm.

TABLE 4
ANALYSIS OF WORKERS' FILES IN LARGE INDUSTRIAL FIRMS
(% in each category unless otherwise specified)

	BOGOTA				MEDELLIN		
	Tot.	Bava-ria	Cem. Samp.	Colt. Bogota	Tot	Colt+ Fab.	Colt. Medel
(1) No. of Workers	1773	1000	651	122	1493	1301	192
(2) % of Women	4.2	5.1	1.8	9.0	45.7	50.6	12.5
(3) Year of Entry							
<1920	1.7	2.7	0.0	2.3	2.6	2.9	0.5
1921-30	7.4	11.5	0.6	9.4	5.9	4.2	17.8
1931-36	9.3	13.3	3.2	8.6	7.1	6.4	12.0
1936-40	8.5	7.9	8.8	10.9	19.7	21.2	9.4
1941-45	38.8	43.5	33.0	31.3	60.2	65.3	26.2
1946-50	34.3	21.1	54.4	37.5	4.5	0.0	34.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(4) Age of Entry							
<15	2.1	2.3	2.0	0.0	21.9	24.2	2.6
16-24	40.8	34.2	49.0	53.3	58.6	59.4	51.9
25-34	42.5	47.5	35.9	35.5	16.9	14.8	34.0
35-44	12.7	13.7	11.2	11.2	2.4	1.5	9.6
>44	1.9	2.2	1.8	0.0	0.2	0.0	1.9
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Weighted Avg.	26.9	27.6	26.0	25.6	21.0	20.0	25.0
(5) Marital Status							
% Single	50.0	46.6	63.9	5.5	74.6	83.4	16.1
(6) Education							
No read-write	4.4	4.5	NA	4.0	0.1	0.0	0.5
Read & Write	88.1	95.5	NA	27.2	84.1	94.0	17.4
Primaria	5.5	0.0	NA	50.40	7.5	0.0	58.4
Bachillerato	1.4	0.0	NA	12.8	7.5	6.0	17.9
>Bachillerato	0.6	0.0	NA	5.6	0.7	0.0	5.8
TOTAL	100.0	100.0	NA	100.0	100.0	100.0	100.0
(7) Years in the Firm							
<2 years	27.3	23.1	38.8	0.0	9.6	9.6	1.0
3-5	16.2	15.4	20.3	1.6	17.4	17.4	1.0
6-10	10.4	12.1	9.7	0.0	15.0	15.0	0.5
11-15	3.2	3.3	3.7	0.8	6.2	6.2	2.1
16-20	7.1	11.3	2.0	7.0	7.3	7.3	9.9
>21	28.9	34.7	25.4	90.6	44.5	44.5	85.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Weighted Avg.	12.7	13.3	9.4	25.0	16.8	15.7	24.4
(8) Internal Mobility							
Worker Only	80.9	80.5	83.1	73.0	88.0	90.1	73.7
Employee Only	14.5	17.7	11.1	6.6	1.5	0.0	11.8
Worker Employee	4.6	1.8	5.9	20.5	10.5	9.9	14.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(9a) Labour Force's Birthplace. Distance							
Bogota	12.6	19.3	0.0	19.7			
Medellin					14.8	10.4	43.2
La Calera	11.3	0.7	30.7	0.8			
Bello, Envigado and Itagui					27.8	30.9	7.9
<50 kms	12.3	11.2	13.9	13.9	22.5	23.4	16.8
50-100 kms	15.5	17.3	14.5	5.7	18.3	18.9	14.2
101-150 kms	7.2	6.7	5.5	19.7	14.9	15.1	14.2
Boyaca	27.4	31.9	22.1	16.4			
Oth. Departments	13.7	12.9	13.3	23.8	1.7	1.3	3.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(9b) Labour Force's Birthplace. Economic Characteristics of the							
Coffee	1.9	2.4	1.0	2.5	16.4	16.1	19.7
Sugar Cane	1.5	1.1	2.1	0.8	3.5	3.5	3.0
Mines	6.2	6.8	4.0	12.4	2.6	2.5	3.0
Cattle	14.4	12.4	19.1	6.6	3.0	3.0	3.0
Industry	31.8	29.4	35.5	33.1	32.1	34.1	13.6
Others	3.1	3.1	3.0	4.1	41.4	40.8	47.0
Boyaca	27.4	31.9	22.1	16.5			
Other Depts.	13.8	12.9	13.2	24.0	1.1	0.0	10.6

TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(10) Migration Process							
Late Migr.	22.6	20.5	29.4	5.8	3.4	3.6	2.6
Early Migr.	39.0	53.0	9.9	69.4	39.8	37.2	52.4
Continuous Migr.	11.7	6.2	22.2	4.1	2.7	3.1	1.1
No Migr.	26.7	20.2	38.5	20.7	54.1	56.1	43.9
TOTAL	100	100	100	100	100	100	100
(11) Previous Work							
Coffee Process.	0.3	0.2	0.2	1.8	0.3	0.3	0.6
Text.Fact.	0.7	1.1	0.2	0.0	13.0	13.2	11.8
Non-Text.Fact.	22.1	24.4	14.7	50.9	10.1	7.6	27.1
Indep.Textiles	0.1	0.2	0.0	0.0	0.7	0.8	0.0
Indep. No Text.	3.4	2.8	4.3	5.5	1.6	1.4	3.5
Commerce	13.8	14.5	12.4	14.5	6.4	5.3	14.1
Agriculture	16.0	9.5	28.1	9.1	7.0	7.7	1.8
Mines	1.4	0.9	2.2	0.0	0.9	1.0	0.0
House Servant	0.9	1.1	0.6	1.8	2.2	1.0	10.6
Student	0.6	0.2	1.2	1.8	1.5	0.8	6.5
Construction	7.4	7.4	7.9	1.8	3.9	3.5	6.5
Other	21.8	25.6	17.1	5.5	5.2	4.3	11.2
No Previous Work	11.3	12.0	11.0	1.8	46.4	53.1	0.6
Tobacco Fact.	0.1	0.0	0.0	3.6	0.1	0.0	1.2
Artisan	0.1	0.0	0.0	1.8	0.6	0.0	4.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(12) Dependants (#)							
0	8.3	5.2	14.3	1.6	5.2	NA	5.2
1	10.5	7.2	16.2	7.0	2.6	NA	2.6
2-5	68.0	71.2	67.9	42.2	38.5	NA	38.5
>=6	13.3	16.5	1.6	49.2	53.6	NA	53.6
TOTAL	100.0	100.0	100.0	100.0	100.0	NA	100.0

*: we did not consider those workers which stayed less than 1 year in the firm.
**: 'Non-Textile' Factories and 'Artisans' should be considered as a single category. The only firm for which we treated those two categories independently was Coltabaco -Bogotá and Medellín-
Sources: Internal Documentation in the Firms
Methodology:
Totals for Bogota and Medellin are weighted averages of the figures for the firms. Averages for (6) and (12) do not include all the firms
(4): The Weighted Average assumes that all workers classified in '16-24 years' had an age of 20, the arithmetic average of the period.
That assumption was done for each period. It was also assumed that the 'average' age for '>15' was 14, and for '>44' was 46
(7): The Weighted Average assumes that all workers in '<2' worked 1 year in the firm; '3-5':4; '6-10':8; '11-15':13; '16-20':18; '>21':26
(10): The definition of 'Late Migrant', 'Early Migrant' and 'Continuous Migrant' was based in the comparisons of the place in which the worker was born, got his 'cedula, and was living when working in the plant. Thus, a worker who was born in a Municipio located in the Category '101-150 kms', got his Cedula in another Municipio in '50-100 kms' and was finally living in Medellín (Bogotá), was considered a Continuous Migrant. That worker who was born in a different category
from that one in which he got his C dula, and the last place coincided with that one in which he was living when working in the plant, was considered an 'Early Migrant', etc

Those are the main conclusions derived from the information presented in Table 4. More detailed analysis of some of the main points follows:

-On Education and Stability:

The level of education of the workers was outstandingly high when set against the population average, or against previously published figures. More than 80% of the workers

(95% in beer and in textiles) knew how to read and write, compared with less than 60% for Antioquia, and the figure for Antioquia was a high one.[38] The stability of the workers was impressive: in textiles nearly half of the workers remained with one firms throughout their lives; in beer more than 30%; figures are lower for cement.

On Migrants.

Migrants represented 70% of the workforce of two of the three firms in Bogotá, 35% for the firms in Medellín[39]. We therefore refer mainly to Bogotá in what follows. Most migrants to Bogotá came from the neighbouring Department of Boyacá, which was rural, had a long tradition of artisanship, no coffee, and was very poor.

Migrants had had time to adjust to urban life; they normally arrived before age 18. Their level of literacy was lower and their jobs were more unstable than the average. One third of all migrants studied claimed to have worked in 'other factories'; there were no other factories, however, so this suggests that they were in fact artisans (a similar figure is obtained for workers born in Bogotá).

We have classified the birthplaces of the workers according to economic characteristics. The categories are: industry[40], coffee, sugar cane, mining, cattle, and 'others'. Coffee areas

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[38] After the first part of the 30's all the textile firms in Medellín required that every new worker knew how to read and write. Our figures are much higher than those derived from official information. According to the Census of 1944/45 88% of the blue collar workers, two thirds of total national male labour force, and 82% of the urban male labour force was literate. See A.Berry, "Real Wages...", p.4a..

[39] We defined 'migrants' as those workers coming from areas distant more than 50 kms from the city. 61.7% of migrant workers came from Boyacá in the case of Bavaria -12% from 'other Departments'. But the case of Bavaria differs from Coltabaco-Bogotá (only 27%) coming from Boyacá. Cementos Samper is in an intermediate position.

[40] Urban areas are generally identified with industry in the sources utilized. In the case of workers coming from other departments different from Antioquia or Cundinamarca it was impossible to classify municipalities. The classification

were not important suppliers of labour: migrants to Medellín came from coffee areas, but were not a large proportion of the labour force; migrants to Bogotá did not come from coffee areas.

was done with base in some maps and tables -for the 30's and 40's-from the Instituto Agustín Codazzi. Each municipality in Cundinamarca and Antioquia was classified in one or other category according to the two principal goods produced.

D. GROWTH IN A DUAL ECONOMY. MAIN LIMITATIONS

The Colombian economy did not meet Lewis' two criteria. Real product wages moved against owners(1); and profit's share increased only slightly. This Section will be devoted to some further theoretical limitations of the dual models, which are relevant to later Chapters.

The Closed Economy. On Investment, Food Supply, and Relative Prices.

The treatment of investment in the dual models is highly unsatisfactory for the study of growth in a particular economy. Economists know how many assumptions are involved in the argument. Profits do not automatically guarantee investment in an economy where land, other non productive assets or luxury imports are important. The relation between investment and growth is not automatic, and the importance of the 'residual' has been discussed for more than two decades in the literature on growth. Chapter V studies the determinants of private investment and those factors behind aggregate economic growth.

In a closed economy, the critical condition separating economies in the low level equilibrium trap from those capable of sustained growth is the capacity to generate an agricultural surplus[41]. In other words, surplus labour is no surplus without surplus food[42]. Technical change in agriculture is not strictly required, but facilitate the production of the food surplus.

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[41] Jorgenson D, "The Development of a Dual Economy", Economic Journal, June, 1961. See specially pp.333-334

[42] Jorgenson assumed -like Lewis- that wages coincide with average productivity ($\bar{y}$)in the pre-capitalist sector. In order to produce a food surplus it is necessary that food production per capita be higher than $\bar{y}$. Formally, it can be proved that the condition which ensures sustained growth in food production per capita (y Y/L) is: $b-(1-\beta)v>0$ where: b: Technical Change in Agriculture; ß: Labour Share in production; v: Population Growth. If $\beta=0.4$ and $v=2.5\%$ a year, then $b=1.5\%$ a year, not a very restrictive condition. Jorgenson's contribution to the discussion was a vital one. It shifted the emphasis away from the massive injections of capital needed for a country to escape the low-level equilibrium trap, and turned attention towards production and technical change in different sectors.

Once the surplus required to start is available, the factors determining the speed of growth are common to both developing and developed economies. Growth will now depend on the saving ratio, the growth of population and technical change[43], as in the Harrod-Domar tradition .

But the food surplus can not be transferred unless the terms of trade move in favour of the modern sector. We already saw (Section A.1) that constant basket wages do not automatically guarantee higher profit's share; as important as wages is the behaviour of the terms of trade, and there is no a priori reason why they should not move in one or another direction[44]. Dual models use very restrictive, and unrealistic, assumptions, in order to elude this problem. Either they assume a highly restrictive consumption function for workers[45]; or

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[43] Op.Cit, p.334

[44] In a closed economy, the variation in the terms of trade depends on growth rates, income and price elasticities of demand in both sectors.
Formally: If $(e_f+e_m) > 1$, where e_f and e_m are the elasticities of demand for food and manufactures. then: P_m/P_f will decrease if $R_m Q_f^* > R_f Q_m^*$
where
R_f: Income " " "
R_m: Income " " "
Q_f^* Rate of Growth of Production of Food
Q_m^* Rate of Growth of Production of Manufactures

Assuming that income elasticity of demand for food and manufactures will be around 0.5 and 1 respectively, the terms of trade will move against industry if the growth rate of the food sector is less than half that of manufactures. If agriculture grows slowly (relative to industry) the rapid growth of manufactures will eventually be checked, even were a food surplus available.
See H.G.Johnson International Trade and Economic Growth, London, 1958,

Niho tries to formalize the dual economy model introducing income and price elasticities of demand for food. He is thus able to conclude that technical change in agriculture is always welcome because it allows the increase in the food surplus required in the Jorgenson model. The effect of technical change in industry will be ambiguous: if the demand for food depends on income and relative prices it could benefit accumulation; if the demand for food depends only on income -in the tradition of the Engel Law- productivity changes in industry will only affect relative prices and will not conduce to the movement of labour from agriculture to industry. See Y. Niho, "The Role of Capital Accumulation in the Industrialization of a Labour Surplus Economy. A formulation of the Fei-Ranis Model", Journal of Development Economics, 3, pp.161-169

[45] In Jorgenson's model the consumption function of the peasants/workers has unitary income elasticity before the worker leaves and 0 income elasticity afterwards. On the other hand, the terms of trade play only a passive role; they adjust to equate the income per head in the two sectors Other models are only marginally more general. The terms of trade adjust to keep constant a pre-assigned gap between wages in the two sectors. Dixit, Op.Cit, p.346.

a landlord which is unknown in Latin America and highly schizophrenic[46] Chapter VII deals with the influence of relative prices on industrial growth.

Opening the Economy. The Export Economy.

The conclusions of dual economy models run against that literature which emphasizes exports and export led growth. Fei and Ranis are explicit on this point:

> "...the study of foreign trade...often appears to border on an 'art' rather than constituting scientific economic analysis aimed at a better understanding of the total growth process...An analysis of the open economy aspects of growth is, moreover, handicapped by the lack of homogeneity among the countries carrying the 'underdeveloped' label, even among those of the labour surplus variety..."Such impressive instances of international comparative advantage as tin in Bolivia, guano in Peru, rubber in Malaya, may, after all, be viewed as historical accidents for which it is hard to find parallels and from which it may thus be difficult to generalize"...
>
> "happily, it is our conviction that it doesn't really matter very much, since the development effort in the labour surplus type of underdeveloped economy is primarily a domestic matter and decided on the battlefield of domestic policy. Given the structural conditions prevailing in such an economy, while foreign trade and aid can play an important facilitating role, it is likely to be a secondary and subsidiary rather than a central and decisive one"..."the additional open economy complexities require a modification rather than a fundamental revision of our basic approach"[47].

Once the economy is open most of the neat previous conclusions no longer apply. Not only are the terms of trade now exogenously determined, but the restriction imposed by the existence of the food surplus is no longer valid. Food can now be bought abroad with the

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[46] Thus, in the model presented by Fei and Ranis, the landlord simultaneously saves in agriculture and invest in industry. The authors explicitly recognize that this is not the absentee landlord so common in many Latin American countries. "The typical agriculture-based underdeveloped country has, almost by definition, inherited a landlord class which, except for the case of the latifundia or absentee landlord, constitutes the main candidate for carrying out the entrepreneurial function in the dualistic economy" (our italics). See H.C.Fei and G.Ranis, Development of the Labour Surplus Economy; theory and policy, Illinois, Homewood, 1964, p. . Even if this land-lord exists, he is highly schizophrenic. He does not behave as a capitalist in the rural sector (he pays average productivity, etc), but his other characteristics are highly dynamic.

[47] Fei H.C.H and Ranis G, Development of the Labour Surplus Economy; theory and policy, Illinois, Homewood, 1964, pp.289-291.

foreign exchange provided by the modern sector exports[48].

[48] As we said, the export economies are difficult to classify. However, there are arguments to classify coffee in the modern sector. See Section A.1

E. CONCLUSIONS.

The purpose of this chapter was to analyse the role of workers and wages on Colombian industrial growth. Dual economy models were considered specially relevant for the discussion of a period in which the supply of labour was indeed 'infinite'; wages in agriculture and construction were constant, and only 7% of the agricultural labour force was needed in order to provide labour for industry.

However, the Colombian scenario seems to differ radically from that one suggested by dual models, and real product wages increased more than 70% in the period of analysis. Two variables seem to be responsible for that: the behaviour of food prices (more accurately, the terms of trade food-manufactures) and the evolution of labour productivity.

The idea of firms hiring unskilled workers is not valid for the Colombian economy in 1925-1950. It was a very segmented labour market, and the firm did always select the most skillful workers: the most educated and those who were already trained by other firms. Artisans seem to have been consider as specially skillful compared to other groups in the population. in the case of the textile sector most workers were trained inside the firm. Once those workers were hired, they stayed with the firms most of their lives.

In this scenario, it is not so difficult to understand why real wages increased through time: if the firm wanted more workers with those particular characteristics, it had to pay higher wages. If other firms were able to pay higher wages, the firm decided to 'sacrifice' profits in order to keep them. Turnover costs (machinery broken with inexperienced workers, costs involved in hiring 'adequate' new workers, etc) were considered high, and in those periods of high inflation (food price increases) the firms decided to 'sacrifice' profits in order to keep those workers.

The importance given to migrants and 'expulsion' of workers from the rural areas as a pre-requisite for industrial growth does not correspond to our findings. Workers did not come from coffee areas, and those coming from the agricultural sector did not work in agriculture before. Most of them worked in 'other plants' before, suggesting that they were artisans.

It is simply not true that coffee processing in the cities served as an intermediate activity for the migrant before jumping into modern industry.[49], and it is unwise to consider the labour force in industry as an homogeneous group: important differences were present between cities and sectors.

The level of conflict was low in Medellín, very high in Bogotá, and this had important consequences for industrial growth. Finally, state legislation does not seem to have influenced the evolution of wages.

[49] F.Botero argues that not even coffee processing plants in the cities hired labour coming from the rural areas. This is something that has to be studied more carfully. See F.Botero, La Industrializacion en Antioquia. Genesis y Consolidación, 1900-1930, Medellín, Centro de Investigaciones Económicas, Universidad de Antioquia, 1984, p.

-BIBLIOGRAPHY

Bejarano,J.A. "El Fin de la Economía Exportadora y los Orígenes del Problema Agrario" Cuadernos Colombianos, No., Bogotá, La Carreta, reprinted with some modifications in El Regimen Agrario. De la Economia Exportadora a la Economia Industrial. Bogota, La Carreta, 1979

Berry,A. "Real Wages Trends in Colombian Manufacturing and Construction during the Twentieth Century", Research Report 7403, Department of Economics, The University of Western Ontario, Canada.

Berry,R.A. and Soligo R, "Rural-Urban Migration, Agricultural Output and the Supply Price of labour in a labour-Surplus Economy", Oxford Economic Papers, July, 1968

Botero,F. La Industrializacion en Antioquia. Genesis y Consolidación, 1900-1930, Medellín, Centro de Investigaciones Económicas. Universidad de Antioquia, 1984

Cundinamarca, Dirección Departamental de Estadistica, Anuario Estadístico Ilustrado, 1930.

Cundinamarca, Dirección Departamental de Estadística, Hechos y Cifras de Cundinamarca, 1949-52.

DANE, Medellín en Cifras, 1675-1975., Regional de Medellín, 1976

Dennison "" in R.Caves (Ed)

Dixit,A.K. "Models of Dual Economies", in J.A. Mirrlees and N.H.Stern, Models of Economic Growth , Macmillan, 1973

Dixit,A.K. "Optimal Development in the Labour Surplus Economy", Review of Economic Studies, jan, 1968.

ECLA. "Analisis y Proyeccions del Desarrollo Economico. El Desarrollo Economico de Colombia. Anexo Estadistico. DANE, Serie Monografica. Coleccion Economica. DANE/SM/CE 70/1

El Mes Financiero y Económico

Fajardo,D. Haciendas, Campesinos y Polfiticas Agrarias en Colombia. 1920-1980, 1

Fei H.C.H. and G.Ranis. Development of the Labour Surplus Economy; theory and policy, Illinois, Homewood, 1964

Harbison,F. and C.A.Myers, Education, Manpower and Economic Growth: Strategies of Human Resource Development, New York, McGraw Hill, 1974

Hornby,J.M. "Investment and Trade Policy in the Dual Economy", Economic Journal, LXXVIII, pp.96-107, 1968.

Johnson,H. International Trade and Economic Growth, London, 1958.

Jorgenson,D.H. "Surplus Agricultural Labour in a Dual Economy", Oxford Economic Papers, Nov, 1967

Jorgenson,D.H. "Testing Alternative Theories of the Development of a Dual Economy" in I.Adelman and E.Thorbecke eds, The Theory and Design of Economic Development, Baltimore, John Hopckins Press, 1966

Jorgenson,D.H. "The Development of a Dual Economy", Economic Journal, June, 1961

Kalmanovitz,S. Desarrollo de la Agricultura en Colombia, Editorial la Carreta, Medellín, 1978

Kindleberger,C. Europe's Postwar Growth, Cambridge, Massachusetts, 1967

Leibenstein,H. Economic Backwardness and Economic Growth, New York, Wiley, 1957

Lewis,W.A. "Economic Development with Unlimited Supplies of labour" in Agarwala A.N and S.P.Singh, (Eds), The Economics of Underdevelopment, Oxford, Oxford University Press, 1963

Lewis,W.A. "Reflections on Unlimited Labour", in L.Di Marco, Economics and Development, 1975Lewis,W.A. "Unlimited Labour. Further Notes", Manchester School, jan, 1958

Mayor,A. Etica, Trabajo y Productividad en Antioquia, Bogotá, Ediciones Tercer Mundo, 1984.

Montenegro ,S. "Historia de la Industria Textil en Colombia. 1900-1945", Tesis de Magister, Universidad de los Andes, 1982,

Niho,Y. "The Role of Capital Accumulation in the Industrialization of a Labour Surplus Economy. A formulation of the Fei-Ranis Model", Journal of Development Economics, 3, pp.161-169

North,D.C. Industrialization in the United States, in H.J.Habakkuk & M.Postan (Eds), The Cambridge Economic History of Europe (2nd ed) (Vol 6, II), Cambridge: University Press, 1965

Ocampo,J.A. and S.Montenegro. Crísis Mundial, Protección e Industrialización, CEREC, Bogotá, 1984.

Ortíz L.B. "La Vida Obrera en Bogotá", El Més Financiero y Económico, April, 1938, pp.47-55

Ortiz,L.B. "Actividades Economicas de la Poblacion Colombiana-Departamento de Antioquia-", Anales de Economia y Estadistica, 1940

Ospina,L. Industria y Protección en Colombia, ESF, 1955

Palacios,M. El Café en Colombia, 1850-1970, Una Historia Económica, Social y Política, El Colegio de México/El Ancora Editores, México, 1983, 2nd ed.

Preobrazhensky,E.A. The New Economics, trans B.Pearce (1965), Oxford, Clarendon Press, 1924.

Rojas F. and Moncayo V.M,

Saul,S.B. Ed. Technological Change: The United States and Britain in the nineteenth Century, London, Methuen, 1970.

Thorp,R. and C.Londoño, "The Effect of the Great Depression on the Economies of Perú and Colombia", in R.Thorp, ed. 1984.

Thorp,R. Ed. Latin America in the 1930's. The Role of the Periphery in World Crisis, St.Antony's/Mcmillan Series, Oxford, 1984.

Torres,I. Los Inconformes. Historia de la Rebeldía de las Masas en Colombia, Bogotá, Editorial Márgen Izquierdo.

U.K. Foreign Office. Annual Report.

U.S American Embassy. 1949, "Colombian Consumers of Imported Rayon...", (by S.E. Clarck), Nov. 28

U.S.Bureau of Labour Statistics. "Wage and Sex Distribution of Industrial Workers in Colombia", Monthly Labour Review, Jan-June. 1941. pp.710-714

U.S.Department of Commerce. Bureau of Foreign and Domestic Commerce,1921, Colombia. A Commercial and Industrial Handbook (bv P.L.Bell)

Urrutia,M. "Estadísticas de Salarios en Bogota. 1863-1933", In Urrutia M and Arrubla M, (eds.), Compendio de Estadísticas Historicas de Colombia, Bogota, Universidad Nacional, 1970.

Urrutia,M. Historia del Sindicalismo Colombiano, 2nd ed, Bogot[a, Editorial la Carreta, 1976

US Department of Agriculture, The agriculture of Colombia, Foreign Agriculture, Boletín No. 1 oct 1942 (by K.Wylie)

Wilken,P.H. Entrepreneurship. A Comparative and Historical Study. New Jersey, Ablex Publishing Corporation, 1979

-APPENDIX I. TABLES

TABLE A-1
CHARACTERISTICS OF PRODUCTION
INDUSTRIAL SECTORS AND DEPARTMENTS

	Participation %				Size of the Typical Firm			RATIOS	
	# Est-abl.	L	Q	VA	L/ /#EST	Q/ /#EST	VA/ /#EST	VA/ /L	VA/
I.INDUSTRIAL SECTORS									
FOOD	26	21	41	17	14	131	12	0.9	0.1
BEVERAGES	5	7	8	12	22	124	43	1.9	0.3
TOBACCO	4	6	2	4	26	54	18	0.7	0.3
TEXTILES	4	20	13	20	79	252	86	1.1	0.3
NON-MET.MIN	7	8	4	9	20	44	24	1.2	0.5
SUM	46	62	69	62					
O.SECTORS	54	38	31	38					
AVERAGE					34	110	41	1.2	0.4
OTHER SECTORS					12	47	13	1.1	0.3
AVERAGE (TOTAL INDUSTRY)					17	82	18	1.1	0.2
II.DEPARTMENTS									
ANTIOQUIA		26		25				0.9	
CUNDINAMARCA		20		25				0.8	
OTHERS		54		50				1.0	

III. INDUST.SECTORS ANTIOQUIA

	# E	L	WAGE	VA	SIZE OF THE "TYPICAL" FIRM L/ /#EST	VA/ #EST	RATIOS VA/ /L	WAGES/ /L(%)	WAGE K/ /VA(/VA
FOOD	14	9	3	7	18	15	0.8	55	66 1.6
BEVERAGES	2	2	1	5	34	69	2.0	102	50 0.8
TOBACCO	5	4	2	3	23	19	0.8	80	100 0.1
TEXTILES	5	45	20	45	229	242	1.1	78	74 3.1
NM.MINERALS	13	11	5	10	22	21	1.0	72	75 4.0
SUM	39	72	31	70					
O.SECTORS	61	28	69	30					
AVERAGE (1-5)					49	51	1.0	75	73 3
OTHER SECTORS					13	14	1.1	85	77 1
AVERAGE (TOTAL INDUSTRY)					27	28	1.1	78	74 2

L: Employment; EST: # of Establishments; Q: Production; VA: Value Added
Sources: Colombia. Dirección General del Censo, 1947. pp.135 and 440.
Methodology. Averages: Arithmetic for Sectors 1-5; weighted for "Other Sectors" and for "Total". Absolute Values for Q and VA: in Millions of Col $ The textile sector includes "desmotadoras" and this could distort the results Wages. Includes Fringe Benefits. It also includes "trabajadores a domcilio"
.L.

TABLE A-2
POPULATION GROWTH IN COLOMBIA. 1905-51
MUNICIPALITIES

	1905-12	1912-18	1918-28	1928-38	1938-51
I.ANNUAL GROWTH RATE (%)					
BOGOTA	2.8	2.9	5.0	3.4	5.2
MEDELLIN	3.7	1.8	4.3	3.4	6.0
OTHER 17 MUN.	2.2	4.5	6.4	0.8	4.3
TOTAL	2.5	3.9	5.9	1.6	4.7
II.ABSOLUTE VARIATION PER YEAR (persons)					
BOGOTA	3037	3790	9143	9489	24001
MEDELLIN	2298	1357	4090	4822	14609
OTHER 17 MUNI	7939	19796	43756	8232	58070
TOTAL	13274	24943	56988	22543	96680

Sources:
McGreevey, 1971, Table 15 and author's calculations
Methodology:
Exponential growth rates in all cases

TABLE A-3
NOMINAL AND REAL WAGES IN COLOMBIA. 1923-1950
(1935=100)

	NOMINAL WAGES			PRICES				REAL WAGES							TERMS OF TRADE Q/L	
								Basket			Product					
	Cement (1)	Textil (2)	Tobacco (3)	Ce. (4)	Te (5)	To (6)	Manuf. (7)	Food (8)	C. (9)	Te (10)	To. (11)	Agric. (12)	C. (13)	Te. (14)	To. (15)	Pf/Pm (16)	Textiles (17)
1923	NA	NA	NA	NA	NA	92	92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1924	NA	NA	81	NA	NA	95	95	111	NA	NA	73	NA	NA	NA	85	117	NA
1925	NA	81	80	200	98	98	132	114	NA	72	70	NA	NA	83	82	86	NA
1926	NA	91	76	241	98	101	147	134	NA	68	57	NA	NA	93	75	91	NA
1927	NA	102	101	291	95	104	163	125	NA	81	81	NA	NA	107	97	77	154
1928	NA	104	95	227	87	111	142	126	NA	83	76	95	NA	120	86	89	172
1929	NA	93	97	191	91	111	131	125	NA	74	78	109	NA	102	88	95	158
1930	NA	86	98	155	81	115	117	99	NA	87	98	114	NA	106	85	85	172
1931	NA	80	84	84	79	119	94	86	NA	94	98	90	NA	102	71	91	165
1932	NA	81	87	77	74	92	81	66	NA	124	132	94	NA	110	94	81	159
1933	75	78	81	91	89	118	99	69	109	113	117	96	83	88	69	70	168
1934	95	87	94	95	102	96	98	96	99	91	98	90	99	85	97	98	198
1935	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	236
1936	97	106	107	105	104	104	104	106	92	100	101	77	93	102	103	102	216
1937	91	109	111	121	98	107	109	110	83	100	102	79	75	112	104	101	204
1938	93	108	133	127	98	109	111	123	76	87	108	89	74	110	122	111	219
1939	100	198	147	127	95	111	111	132	76	150	112	82	79	208	133	119	278
1940	NA	202	143	124	95	113	111	125	NA	162	115	117	NA	212	127	113	337
1941	NA	206	148	121	110	115	115	124	NA	166	120	118	NA	187	129	107	350
1942	113	202	155	127	135	117	126	146	77	138	106	77	89	149	133	116	398
1943	118	248	146	127	140	119	128	174	68	143	84	69	93	177	123	135	373
1944	114	268	135	138	160	121	139	217	53	124	63	71	83	167	112	155	394
1945	150	288	175	154	200	122	159	235	64	123	74	78	98	144	143	148	348
1946	NA	333	168	182	235	122	180	258	NA	129	65	108	NA	142	137	143	376
1947	NA	385	202	193	275	122	197	305	NA	126	66	86	NA	140	165	155	376
1948	309	445	316	201	350	122	225	355	87	125	89	90	154	127	258	158	NA
1949	355	514	NA	204	350	131	228	380	94	135	NA	101	175	147	NA	166	NA
1950	371	594	NA	204	350	147	234	458	81	130	NA	92	182	170	NA	196	NA

Sources:
Internal Files Cementos Samper, Fabricato and Coltabaco
J.A.Ocampo and S.Montengro, Crisis Mundial, Proteccion e Industrializacion. Cerec, 1984
M.Urrutia and M.Arrubla, Compendio de Estadisticas Historicas de Colombia, p.74

Notes and Methodology: Hourly Wages. Information collected in the same week of each year. Men in Tobacco and Cement; women in textiles; Paashe Price Index in all cases

Col(1): 'Peones' in Cementos Samper; they represent 30% of the labour force in that firm
Col(2): 'Envolvedoras', 'Hilados' and 'Telares' in Fabricato. This three sections represent more than 70% of total workers in that firm; figures for 1945-50 are only approximate. We had figures for total wages per worker in Fabricato in 1945 and 1950.
Col (3). 'Hebras' and 'Hechura de Cigarrillos'. In the last Section, 'Maquinista' and Ayudante de Maquinista'. Workers in these two Sections represent nearly 50% of total workers in Coltabaco
Col(4): 1925-35: Ocampo and Montenegro, ibid, p.139
1935-50: Internal Documents in Cementos Argos in Medellin
Col(5): Paashe Price Index for 5 products in Fabricato. They account for 80% of total sales
Col(6): Prices for 'Pierot' cigarretes in Coltabaco Medellin. Figures for 1928-30 and 1940-42 are only approximate
Col(7): Arithmetic Average for Cement, Textiles and Tobacco
Col(8): 1924-45: Price of Food in the four largest colombian cities. J.A.Ocampo and S.Montenegro,
1945-50: Cost of Living in Bogota
1935-50: Agricultural Salaries: Cold Climate Cundinamarca. 1958 prices. In A.Berry,"Real Wages Trends in Colombian Manufacturing and Construction during the Twentieth Century", Research Report 7403, Department of Economics, The University of Western Ontario, Canada, Table 1, p.3
Col(12):1928-35: Coffee Piece Rate. M.Palacios, El Cafe en Colombia, cited in R.Thorp and C.Londono, p.106
Col(17):Labour Productivity was calculated from direct information from Fabricato, one of the largest firms in the country. Nominal Sales were divided by a price index of clothing in the same firm.
The number of workers corresponds to workers in 'envolvedoras', 'hilados' and 'telares'. Figures for 1941-46 were interpolated

TABLE A-3b
Wages and Sex Composition for Different Sectors.
Colombia, 1929-1939.

	Average Daily Wages (Col$)			Partic.% of Men	
	Total (1)	Men (2)	Women (3)	Total (4)	Plants (5)
Mining*	1.81	1.81	1.31	99.4	
Electr. and Water	1.75	1.76	1.14	98.7r	
Transportation**	1.50	1.50	0.64	99.2	
Manufactures					
Food	1.22	1.50	0.78	57.5	45.30
Beverages	2.03	2.24	1.29	78.5	70.83
Tobacco	2.01	2.37	1.63	51.7	53.14
Textiles	1.30	1.47	1.05	63.7	26.88
Leather	1.74	1.96	1.31	66.4	
Clothing	1.29	1.84	1.27	5.6	
Soap	1.02	1.02	0.78	100.0	
Non-Met.Min	1.37	1.40	1.00	94.2	
Metallic Const.	1.75	1.78	0.67	97.6	
Woodworking	1.90	2.19	0.84	76.1	
Construction	1.28	1.28	0.74	99.7	
Chemicals	1.06	1.26	0.88	46.2	
Paper	0.85	0.93	0.81	34.1	
Graphic Arts	1.85	2.19	0.88	73.8	
Services***	1.48	1.78	0.81	67.3	
Public Works	1.30	1.30	NA	100.0	

*: Salt, Coal, Petroleum **: Railway, Road, Taxi, Streetcar, Airplane ***: Hotels, Restaurants, Theatres, Telephone,Postal

Source:
Cols(1)-(4): U.S. Department of State, "Wages and Sex Distribution of Industrial Workers in Colombia, 1939", Monthly Labour Review, Jan-June, 1941. p.712
Col(5): Memoria de Gobierno. Imprenta Oficial, Medellín, 1929, pp.104-1078

Methodology:
Cols (1)-(4): 82 industrial establishments were covered, mainly in Bogota. The largest 30 firms of the sample represent 85% of total industrial capital in Bogotá, 52% of the workers, 63% of the pay rolls and 70% of the value of production.
Col(5): Food: (weighted) average for Nacional de Chocolates(47.7%) and Noel(43.8%); Beverages: Cerveceria Libertad(70.8%); Tobacco: Coltabaco(53.1%); Textiles: (weighted) average for Rosellon(35.6%), Colteier(15%), Bello(29.5%) and Fabricato(29.9%)

TABLE A-4
INDUSTRIAL WORKERS
MIGRANTS
(% in each category unless otherwise specified)

	BOGOTA			MEDELLIN	
	Tot.	Bava-ria	Cem. Samp.	Colt. Bogota	Tot Colt+ Fab.	Colt. Medel
(1) No. of Workers	514		73	33	
(2) % of Women	2.7		9.6	15.2	
(3) Year of Entry					
<1920	2.1		0.0	0.0	
1921-30	11.1		9.6	27.3	
1931-36	8.9		6.8	3.0	
1936-40	7.0		8.2	9.1	
1941-45	48.6		31.5	33.3	
1946-50	22.2		43.8	27.3	
TOTAL	100.0		100.0	100.0	
(4) Age of Entry					
<15	0.8		0.0	8.8	
16-24	33.6		47.9	41.2	
25-34	50.5		37.0	44.1	
35-44	13.6		15.1	5.9	
>44	1.6		0.0	0.0	
TOTAL	100.0		100.0	100.0	
Weighted Avg.					
(5) Marital Status					
% Single	51.6		5.5	26.5	
(6) Education					
No read; No write	12.2		4.1	0.0	
Read & Write	76.2		31.5	23.5	
Primaria	0.0		42.5	52.9	
Bachillerato	7.7		13.7	17.6	
>Bachillerato	3.9		8.2	5.9	
TOTAL	100.0		100.0	100.0	
(7) Years in the Firm					
<2 years	28.2	60.7	0.0	0.0	
3-5	19.1	22.0	2.7	5.9	
6-10	13.6	8.7	0.0	0.0	
11-15	2.9	0.7	1.4	0.0	
16-20	12.6	0.7	6.8	5.9	
>21	23.5	7.3	89.0	88.2	
TOTAL	100.0	100.0	100.0	100.0	
Weighted Avg.					
(8) Internal Mobility					
Worker Only	81.5		83.6	67.6	
Employee Only	16.7		6.8	17.6	
Worker Employee	1.8		9.6	14.7	
TOTAL	100.0		100.0	100.0	
(9a) Labour Force's Birthplace. Distance					
Bogota	0.0		0.0	0.0	
Medellin	0.0		0.0	0.0	
La Calera	0.0		0.0	0.0	
Bello, Envigado and It	0.0		0.0	0.0	
<50 kms	0.0		0.0	0.0	
50-100 kms	0.0		0.0	0.0	
101-150 kms	13.4		32.9	79.4	
Boyaca	61.7		27.4	0.0	
Oth. Departments	24.9		39.7	20.6	
TOTAL	100.0		100.0	100.0	
(9b) Labour Force's Birthplace. Economic Characteristics of the					
Coffee	3.1		2.9	35.0	
Sugar Cane	0.4		1.4	10.0	
Mines	3.1		8.7	0.0	
Cattle	5.1		4.3	10.0	
Industry	1.0		10.1	0.0	
Others	0.8		1.4	10.0	
Boyaca	61.7		29.0	0.0	

Other Depts.	24.9	42.0	35.0
TOTAL	100.0	100.0	100.0
(10) Migration Process			
Late Migr.	3.9	6.9	2.9
Early Migr.	89.2	86.1	97.1
Continuous Migr.	6.9	6.9	0.0
No Migr.	0.0	0.0	0.0
TOTAL	100.0	100.0	100.0
(11) Previous Work			
Coffee Process.	0.5	0.0	0.0
Text.Fact.	1.1	0.0	17.9
Non-Text.Fact.	24.2	53.8	32.1
Indep.Textiles	0.2	0.0	0.0
Indep. No Text.	2.0	11.5	0.0
Commerce	16.7	19.2	7.1
Agriculture	8.4	3.8	3.6
Mines	0.7	0.0	0.0
House Servant	0.7	0.0	7.1
Student	0.2	3.8	10.7
Construction	8.4	3.8	3.6
Other	28.0	0.0	17.9
No Previous Work	9.0	3.8	0.0
Tobacco Fact.	NA	7.7	3.6
Artisan	NA	3.8	0.0
TOTAL	100,0	100.0	100.0
(12) Parents live in:			
Bogota	14.4		
Medellin	0.0		
La Calera	0.0		
Bello, Envigado and It	0.0		
<50 kms	0.5		
50-100 kms	4.1		
101-150 kms	13.3		
Boyaca	53.3		
Oth. Departments	14.4		
TOTAL	100.0		
(13) Dependants (#)			
0	7.9	2.7	0.0
1	9.7	8.2	0.0
2-5	68.6	43.8	26.5
>=6	13.8	45.2	73.5
TOTAL	100.0	100.0	100.0

Sources and Methodology: See Table 5
Migrants were defined as those workers coming from places farther than 100 kms

TABLE A-5
INDUSTRIAL WORKERS -WOMEN-
(% in each category unless otherwise specified)

	BOGOTA			MEDELLIN	
	Tot.	Bava-ria	Cem. Samp.	Colt. Bogota	Tot Colt+ Fab.	Colt. Medel
(1) No. of Workers	51	8	11		24
(2) % of Women	100.0	100.0	100.0		100.0
(3) Year of Entry					
<1920	19.6	0.0	0.0		0.0
1921-30	58.8	0.0	0.0		4.2
1931-36	9.8	0.0	0.0		4.2
1936-40	2.0	0.0	9.1		12.5
1941-45	0.0	25.0	27.3		41.7
1946-50	9.8	75.0	63.6		37.5
TOTAL	100.0	100.0	100.0		100.0
(4) Age of Entry					
<15	4.0	0.0	0.0		4.2
16-24	44.0	50.0	54.5		25.0
25-34	34.0	37.5	27.3		45.8
35-44	18.0	12.5	18.2		25.0
>44	0.0	0.0	0.0		0.0
TOTAL	100.0	100.0	100.0		100.0
Weighted Avg.					
(5) Marital Status					
% Single	51.0	50.0	63.6		91.7
(6) Education					
No read; No write	64.0	NA	0.0		0.0
Read & Write	24.0	NA	36.4		20.8
Primaria	0.0	NA	36.4		58.3
Bachillerato	6.0	NA	18.2		16.7
>Bachillerato	6.0	NA	9.1		4.2
TOTAL	100.0	NA	100.0		100.0
(7) Years in the Firm*					
<2 years	11.8	75.0	0.0		0.0
3-5	5.9	12.5	9.1		0.0
6-10	3.9	12.5	0.0		0.0
11-15	3.9	0.0	0.0		4.2
16-20	17.6	0.0	27.3		29.2
>21	56.9	0.0	63.6		66.7
TOTAL	100.0	100.0	100.0		100.0
Weighted Avg.					
(8) Internal Mobility					
Worker Only	86.3	37.5	72.7		81.8
Employee Only	13.7	62.5	9.1		4.5
Worker Employee	0.0	0.0	18.2		13.6
TOTAL	100.0	100.0	100.0		100.0
(9a Labour Force's Birthplace. Distance					
Bogota	30.6	0.0	18.2		
Medellin					45.8
La Calera	0.0	11.1	0.0		
Bello, Envigado and Itagui					0.0
<50 kms	10.2	11.1	18.2		16.7
50-100 kms	30.6	11.1	0.0		16.7
101-150 kms	8.2	11.1	27.3		16.7
Boyaca	18.4	22.2	9.1		
Oth. Departments	2.0	33.3	27.3		4.2
TOTAL	100.0	100.0	100.0		100.0
(9b Labour Force's Birthplace. Economic Characteristics of the					
Coffee	5.8	0.0	0.0		42.9
Sugar Cane	1.9	0.0	0.0		0.0
Mines	9.6	0.0	30.0		0.0
Cattle	25.0	0.0	0.0		14.3
Industry	38.5	14.3	30.0		0.0
Others	0.0	14.3	0.0		42.9
Boyaca	17.3	28.6	10.0		0.0
Other Depts.	1.9	42.9	30.0		0.0
TOTAL	100.0	100.0	100.0		100.0

(10 Migration Process				
Late Migr.	0.0	0.0	18.2	4.2
Early Migr.	61.5	25.0	54.5	0.0
Continuous Migr.	0.0	50.0	9.1	50.0
No Migr.	38.5	25.0	18.2	45.8
TOTAL	100.0	100.0	100.0	100.0
(11 Previous Work				
Coffee Process.	0.0	0.0	NA	0.0
Text.Fact.	0.0	0.0	NA	10.0
Non-Text.Fact.	12.5	25.0	NA	30.0
Indep.Textiles	6.3	0.0	NA	0.0
Indep. No Text.	0.0	0.0	NA	0.0
Commerce	0.0	0.0	NA	15.0
Agriculture	0.0	0.0	NA	0.0
Mines	0.0	0.0	NA	0.0
House Servant	50.0	50.0	NA	30.0
Student	0.0	0.0	NA	10.0
Construction	0.0	0.0	NA	0.0
Other	31.3	25.0	NA	0.0
No Previous Work	0.0	0.0	NA	0.0
Tobacco Fact.	0.0	0.0	NA	0.0
Artisan	0.0	0.0	NA	5.0
TOTAL	100.0	100.0	NA	100.0
(12 Parents live in:				
Bogota	85.0	37.5	NA	NA
Medellin	0.0	0.0	NA	NA
La Calera	0.0	12.5	NA	NA
Bello, Envigado and It	0.0	0.0	NA	NA
<50 kms	5.0	12.5	NA	NA
50-100 kms	0.0	0.0	NA	NA
101-150 kms	0.0	0.0	NA	NA
Boyaca	5.0	25.0	NA	NA
Oth. Departments	5.0	12.5	NA	NA
TOTAL	100.0	100.0	NA	NA
(13) Dependants (#)				
0	2.0	28.6	0.0	4.2
1	2.0	28.6	9.1	4.2
2-5	80.0	42.9	45.5	50.0
>=6	16.0	0.0	45.5	41.7
TOTAL	100.0	100.0	100.0	100.0

Sources and Methodogy: See Table 5

TABLE A-6
INDUSTRIAL WORKERS
WORKERS HIRED BEFORE 1930
(% in each category unless otherwise specified)

	BOGOTA			MEDELLIN	
	Tot.	Bava-ria	Cem. Samp.	Colt. Bogota	Tot Colt+ Fab.	Colt. Medel
(1) No. of Workers	183		15		35
(2) % of Women	21.9		0.0		2.9
(3) Year of Entry					
<1920	26.2		0.0		2.9
1921-30	73.8		100.0		97.1
1931-36	0.0		0.0		0.0
1936-40	0.0		0.0		0.0
1941-45	0.0		0.0		0.0
1946-50	0.0		0.0		0.0
TOTAL	100.0		100.0		100.0
(4) Age of Entry					
<15	10.9		0.0		11.4
16-24	47.7		80.0		65.7
25-34	31.0		20.0		22.9
35-44	9.2		0.0		0.0
>44	1.1		0.0		0.0
TOTAL	100.0		100.0		100.0
Weighted Avg.					
(5) Marital Status					
% Single	30.6		0.0		8.6
(6) Education					
No read; No write	32.0		0.0		26.5
Read & Write	58.6		13.3		47.1
Primaria	0.0		73.3		20.6
Bachillerato	7.7		13.3		5.9
>Bachillerato	1.7		0.0		0.0
TOTAL	100.0		100.0		100.0
(7) Years in the Firm*					
<2 years	8.7		0.0		0.0
3-5	8.2		0.0		2.9
6-10	4.9		0.0		0.0
11-15	4.9		0.0		2.9
16-20	7.7		0.0		94.3
>21	65.6		100.0		0.0
TOTAL	100.0		100.0		100.0
Weighted Avg.					
(8) Internal Mobility					
Worker Only	77.7		73.3		71.4
Employee Only	19.0		0.0		14.3
Worker Employee	3.3		26.7		14.3
TOTAL	100.0		100.0		100.0
(9a) Labour Force's Birthplace. Distance					
Bogota	24.9		21.4		0.0
Medellin	0.0		0.0		37.1
La Calera	0.6		7.1		0.0
Bello, Envigado and It	0.0		0.0		8.6
<50 kms	13.0		21.4		14.3
50-100 kms	23.7		0.0		14.3
101-150 kms	5.1		14.3		22.9
Boyaca	21.5		14.3		0.0
Oth. Departments	11.3		21.4		2.9
TOTAL	100.0		100.0		100.0
(9b) Labour Force's Birthplace. Economic Characteristics of the					
Coffee	2.8		0.0		30.8
Sugar Cane	0.6		0.0		0.0
Mines	8.9		7.1		0.0
Cattle	17.3		7.1		7.7
Industry	35.8		42.9		7.7
Others	2.2		7.1		53.8
	0.0		0.0		0.0
Boyaca	21.2		14.3		0.0
Other Depts.	11.2		21.4		0.0

TOTAL	100.0	100.0	100.0
(10) Migration Process			
Late Migr.	2.5	0.0	2.9
Early Migr.	69.1	78.6	60.0
Continuous Migr.	1.2	0.0	0.0
No Migr.	27.2	21.4	37.1
TOTAL	100.0	100.0	100.0
(11) Previous Work			
Coffee Process.	0.0	0.0	0.0
Text.Fact.	0.0	0.0	3.6
Non-Text.Fact.	18.6	60.0	32.1
Indep.Textiles	0.7	0.0	0.0
Indep. No Text.	1.4	0.0	0.0
Commerce	4.1	0.0	25.0
Agriculture	6.9	0.0	3.6
Mines	1.4	0.0	0.0
House Servant	6.2	10.0	0.0
Student	0.0	10.0	10.7
Construction	6.9	0.0	7.1
Other	11.7	10.0	7.1
No Previous Work	42.1	0.0	0.0
Tobacco Fact.	0.0	0.0	7.1
Artisan	0.0	10.0	3.6
TOTAL	100.0	100.0	100.0
(12) Parents live in:			
Bogota	87.7		
Medellin	0.0		
La Calera	0.0		
Bello, Envigado and It	0.0		
<50 kms	3.5		
50-100 kms	1.8		
101-150 kms	0.0		
Boyaca	0.0		
Oth. Departments	7.0		
TOTAL	100.0		
(13) Dependants (#)			
0	1.7	0.0	0.0
1	2.8	0.0	0.0
2-5	67.4	53.3	40.0
>=6	28.2	46.7	60.0
TOTAL	100.0	100.0	100.0

Sources and Methodology: See Table 5

CHAPTER III

ISSUES ON DEMAND

INTRODUCTION

The main purpose of this paper is to explore some issues on demand and industrial growth. Was demand an important factor in the explanation of economic growth?. Most of the Latin American economic literature assigns great importance to the evolution of commodities -prices and quantities-, and presumably the idea behind is that larger exports bring additional demand into the economy creating incentives for additional production. There is also the complementary idea that higher commodity exports -total exports in general- will bring foreign exchange into the economy which in turn is required when purchases of capital goods and raw materials are required.

The first Section of this Chapter explores one issue which has originated important discussions among colombian historians and which is central for the following Sections. How segmented were the markets?. If those firms located in Medellin (Bogota) sold all their production in Medellin or in Antioquia, we should give more weight to policies which created demand in Antioquia. The main conclusion of the Section is that, even at the beginning of our period, firms were selling at least 50% of their production in other departments, -and not only in the neighbouring ones-. This could be predicted even if we did not have information of the size of the regional markets. As shown in the same Section, the market of Antioquia was even comparable with that one of Cundinamarca, and even less with the "natural" market surrounding Bogota. As a first conclusion, then, what is relevant for us is the national market, even since the 20s.

Section II is related with savings and investment in Colombia. It shows, basically, that the evolution of the current deficit was an important factor in stabilizing total savings, mainly

because the foreign sector -foreign savings- was highly unstable in the period. But it also shows that private savings were much more stable than both public and foreign savings. They were also more important. But the private sector was also more important in relation to investment. In this area, what the statistics show is that the government did not played an stabilizing role, both private and public investment moving with the cycle.

Section III tries to study possible relations between demand and production, and shows two important aspects of production: first, that most variables related with production (GNP. aggregated industrial production and sectorial industrial production) tend to move together[1]. Second, it also shows that the sum of the current account and the fiscal deficit predicts well the evolution of production -at the different levels-, the only possible exception being the production of tobacco. Because high power money is closely associated in our countries with the corrected current account and with the corrected public deficit, we also observe a close association between money supply and production. This last issue, however, needs future work: it is necessary to give empirical meaning to the relation mentioned before[2]. Also, we will analyze the line of causality between money and production with some standard time series methodologies available [3].

Finally, Section IV discusses more deeply and carefully the issue of the fiscal deficits. There is an extensive literature trying to analyze the fiscal stance of the government. Deficits are produced automatically during depressions mainly because the close relation between taxes and national income. They should be compared at a given level of employment if something

[1] But those first results could hide the fact that industrial growth was much higher than the average for the whole economy and that should be explained.

[2] See R. Barro " ", In H.Gómez (et.al), (Eds), Lecturas sobre Moneda y Banca, Bogotá, Fedesarrollo; also, J.J. Echavarría, "Colombia 1970-85. Management and Consequences of Two large External Shocks" Working Paper No.20, Overseas Development Institute, july, 1987

[3] Different papers in the book edited by K.Brunner on the Depression of the 30s bring that analysis into the discussion. See K. Brunner (Ed), The Great Depression Revisited, Boston,1981. See in particular the papers by Brunner, Temin and Roberts

meaningful is to be said on government policy. There are other possible corrections to the deficit advocated this days when "ultra-rationality" of the consumer seems to be assumed[4]. We discuss some additional corrections for the effects of inflation and devaluation of the exchange rate.

[4] H.H Buiter, "Measurement of the public sector deficit and its implications for policy evaluation and design", IMF Staff Papers, june, 1983

A. REGIONAL OR NATIONAL MARKETS.

Were firms using the national market since the "beginnings" of the industrialization process?. What was the size of the different regional markets?. Those are the two questions we want to address in this Section. The discussion on those topics is related, first, with the issue of accumulation of the capital required to create the first industrial plants. Ceteris paribus, the richer the region, the more likely some people will accumulated the required money. Second, it is related to the issue of demand. If Antioquia's market was much larger than other "natural" markets of the country, it is easier to understand why Antioquia's industry was born earlier.

Third, the size of the market is important in our discussion of economic policy. If markets were very segmented we should assign more weight to policies with larger relative impact on that particular region we are interested in -e.g. Antioquia, or Cundinamarca-.

On the first issue -required capital- Safford and Lopez Toro[5] seem to assume that both conditions, the distribution of income (1) and the size of the market (2) were conducive to capital accumulation. According to Safford , Antioquia had but 8% of the population and 40% or more of exports of the country at the end of the colonial period. Moreover, being gold -money- a large proportion of Antioquia's exports, it yielded a a wage, price and profit structure conducive to the formation of large holdings of wealth. On coffee, the census of 1932 showed that Antioquia produced -and exported- 46.9% of the total for the country.

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[5] F.Safford "Significación de los Antioquenos en el desarrollo Económico Colombiano", Anuario Colombiano de Historia Social y de la Cultura, V(1967), pp.49-6; A. Lopez Toro, Migración y Cambio Social en Antioquia en el Siglo XIX, Bogotá, CEDE, Universidad de los Andes, 1970..

Safford and Lopez Toro seem also to believe that the size of the market was larger in Antioquia, both in absolute and per-capita terms.

McGreevy brings some interesting points to the discussion. He accepts the thesis of the larger size of Antioquias market, and he quotes the results of the Lebret mission which showed that Antioquia had the largest income per capita.

Fortunately, on the issue of demand and the size of the markets, we have the information provided by T.Hoffman to the American Government. The author did a very specific work, trying to see where the american exporters could sell which goods, and in which markets, in Colombia[6]. The main results are shown in Table 1

[6] H.T. Hoffman "Marketing Areas in Colombia", US.Department of Commerce, Bureau of Foreign and Domestic Comerce, International Reference Service, SEPT, 1945

TABLE 1

THE SIZE OF ANTIOQUIA'S MARKET. PROXIES" FOR REGIONAL INCOME

I.ABSOLUTE VARIABLES (Partic.% in Total)	Railways (Miles)	Highways (Miles)	Automov. $	Autobuses $	...cks $	Telephons $	Elect. Power HP	Radios $	Imports US$	Exports exc.gold US$	Exports US$	Production US$	Indust.Es.in $	K Investe Indust US$
	1942	1942	1942	1942	1942	1942	1940	1944	1943	1943	1943	1942	1942	1942
Antioquia	11.17	10.43	13.36	23.50	10.29	19.34	42.67	11.11	21.29	17.93	20.34	58.73	18.59	22.94
Caribbean Marketing Area:	16.83	18.38	23.39	20.60	21.08	21.09	5.21	22.72	23.93	14.31	4.98	1.17	38.74	24.95
Atlantico	0.00	1.44	11.21	5.77	5.67	9.04	3.16		18.34	1.62	0.82	0.04	12.44	16.01
Bolivar	4.62	2.51	6.34	6.27	3.93	3.46	0.00		3.38	1.35	0.00	0.43	3.96	5.41
Magdalena	5.66	4.81	1.36	2.29	2.52	1.81	0.00		0.22	0.15	0.00	0.44	1.86	1.43
Norte de Santander	1.98	4.91	2.28	3.51	5.26	4.61	2.05		1.18	6.48	3.45	0.00	5.51	0.66
Santander (northern part)	3.77	4.63	2.19	2.76	3.70	3.76	0.00		0.97	4.71	1.52	0.26	7.77	1.44
Cauca Valley Marketing Area	34.04	30.34	21.15	21.78	22.78	21.12	3.44	24.44	15.83	42.44	40.97	32.77	24.95	22.61
Caldas	12.26	6.93	7.11	7.73	7.17	10.27	1.72		3.11	31.14	38.43	8.65	18.04	4.78
Cauca	4.85	4.85	1.65	1.30	2.55	0.58	0.90		0.15	1.58	1.82	7.23	2.47	1.23
Narino	3.38	6.13	1.39	2.93	2.90	0.96	0.00		0.48	0.94	0.41	6.43	3.46	1.14
Valle del Cauca	14.43	11.36	10.94	9.66	9.93	9.04	0.00		12.02	7.93	0.38	0.81	0.98	15.52
Choco	0.00	1.07	0.06	0.06	0.22	0.26	0.02		0.14	0.92	0.00	9.62	0.00	0.00
Bogota Marketing Area:	30.76	40.30	42.05	34.21	45.69	37.65	13.27	41.67	38.81	25.16	25.71	6.71	24.52	29.26
Boyaca	5.23	7.49	1.74	1.71	6.70	1.63	0.00		0.65	0.01	0.00	0.00	1.27	1.28
Cundinamarca	19.99	12.99	34.78	28.93	27.31	33.17	13.27		36.99	13.54	15.92	0.83	15.27	23.74
Huila	2.12	7.78	0.78	4.56	0.84	0.80	0.00		0.11	0.74	8.77	0.73	2.26	0.32
Santander (southern part)	1.51	4.63	2.28	2.73	3.71	1.25	0.00		0.97	4.71	1.52	0.26	1.34	0.44
Tolima	9.98	5.47	2.42	3.78	4.97	1.61	0.00		0.66	6.18	7.58	5.68	4.38	3.48
Intendencia of Meta	0.00	1.48	0.27	0.33	1.66	0.00	0.00		0.02	0.04	0.00	0.00	0.00	0.00
Comisaria del Caquata	0.00	0.45	0.82	0.17	0.25	0.00	0.00		0.00	0.04	0.00	0.00	0.00	0.00
Other Areas:	0.00	0.63	0.05	0.00	0.16	0.00	0.00	0.06	0.14	0.16	0.00	0.62	1.20	0.24
TOTAL														
Percentage	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Absolute Numbers	2121	18594	17454	3622	8496	46729	211479	180000	83990048	1.3E+08	100643468	20913901	1415	76266987

II. PER CAPITA

	Railways (Miles)	Highways (Miles)	Automov. $	Autobuses $	Trucks $	Telephons $	Elect. Power	Radios $	Imports US$	exc.gold US$	Exports US$	Production US$	Indust.Es.in $	K Investe Indust US$
Antioquia	0.04	0.09	0.03	0.03	0.36	4.11	0.79	783.87	882.89	885.68	483.44	0.01	688.51	0.85
Caribbean Marketing Area:	0.03	0.07	0.01	0.03	0.17	0.21	0.69	337.07	308.14	84.88	4.11	0.01	319.89	0.83
Atlantico	0.11	1.46	0.16	0.36	3.15	5.75	0.00	11494.43	1518.78	12.66	6.28	0.13	9114.65	0.89
Bolivar	0.01	0.05	0.01	0.01	0.07	0.00	0.00	120.71	73.43	0.00	3.94	0.00	179.38	0.82
Magdalena	0.02	0.01	0.00	0.01	0.02	0.00	0.00	8.79	0.98	0.00	4.44	0.00	52.43	0.82
Norte de Santander	0.06	0.05	0.02	0.05	0.26	0.68	0.00	111.62	977.84	418.26	0.00	0.01	68.42	0.83
Santander (northern part)	0.00	0.06	0.02	0.05	0.29	0.00	0.00	131.09	951.31	246.76	0.67	0.02	177.68	0.00
Cauca Valley Marketing Area	0.06	0.07	0.01	0.04	0.18	0.15	0.01	244.19	975.52	985.31	125.98	0.01	316.82	0.84
Caldas	0.14	0.24	0.05	0.12	0.93	0.81	0.00	585.00	7549.83	7492.56	358.49	0.03	694.47	0.13
Cauca	0.04	0.02	0.00	0.02	0.02	0.19	0.00	11.13	161.44	157.49	129.76	0.00	81.94	0.83
Narino	0.06	0.02	0.01	0.02	0.04	0.00	0.00	29.16	102.38	35.88	116.75	0.00	73.01	0.84
Valle del Cauca	0.15	0.24	0.04	0.18	0.52	0.00	0.00	1248.49	1226.81	1833.32	21.86	0.02	1464.43	0.89
Choco	0.01	0.00	0.00	0.00	0.01	0.11	0.00	6.75	64.11	0.00	111.93	0.00	0.00	0.00
Bogota Marketing Area:	0.03	0.06	0.01	0.03	0.14	0.25	0.58	251.21	242.63	199.48	18.81	0.00	171.95	0.82
Boyaca	0.03	0.01	0.00	0.02	0.03	0.00	0.00	1.85	0.31	0.00	0.00	0.00	39.83	0.83
Cundinamarca	0.15	0.67	0.08	0.25	1.78	3.55	0.00	3411.64	1859.85	1759.32	0.67	0.02	1988.88	0.17
Huila	0.18	0.82	0.02	0.01	0.00	0.00	0.00	11.58	115.19	97.45	19.19	0.00	38.41	0.82
Santander (southern part)	0.00	0.06	0.02	0.05	0.09	0.00	0.00	131.09	951.31	246.76	8.67	0.00	54.71	0.84
Tolima	0.07	0.03	0.02	0.05	0.00	0.00	0.00	62.17	899.97	888.84	133.98	0.01	298.85	0.85
Intendencia of Meta	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	1.54	0.00	0.00	0.00	0.00	0.00
Comisaria del Caquata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.12	0.00	0.03	0.00	0.00	0.00
Other Areas:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	1.18	0.00	0.76	0.00	1.06	0.00
TOTAL	0.02	0.04	0.01	0.02	0.11	0.55	0.41	198.97	204.49	228.82	47.55	0.00	173.48	0.82

Sources: U.S.Department of Comerce. H.T.Hoffman (1945), pp.2-8
Electrical Power: U.S.Tariff Comission. (1949). p.37
Methodology:
The figures for Electrical Power only include electric plants (120 with a potential of 1000-2000 horsepowers.

Hoffman considers 5 important "natural" regional markets in Colombia, with transport costs and geographical divisions determining each market. One important aspect of Table 1 is that the Antioquia's Market corresponded only to the department of Antioquia, while the "Bogota Market" included the departments of Boyaca, Cundinamarca, Huila, Santander, Tolima, the Intendencia of Meta and the Comisaria of Caqueta. It is also clear from the Table that the "Bogota" market was larger than the Antioquia's market for all variables of Table 1 except for "gold production" and "electric power", not the best two variables if we want to consider purchasing capacity. Even when compared only with the department of Cundinamarca, it is clear that there are not very important differences, being Antioquia's market smaller even for such variables as miles of highways and railways, number of automobiles, trucks and telephones; also in "total imports ", but this variable is likely to present many problems[7]. Electrical Power, the other variable for which Antioquia has a clear leading is more related with the development of industry that directly with demand. Number of industrial establishments and Capital Invested in Industry are also more related with industrial production than with demand as such. The results are even less impressive for Antioquia when we compare variables in per-capita terms.

As a first conclusion from the analysis, it is clear that Antioquia's market was not as important as has been generally said, at least not during our period of analysis. Of course, that does not mean that some variables like gold exports were not important for capital accumulation in some hands; but looking just at demand for manufactured products, it is clear that the Cundinamarca's market was much more important. How to explain, then, that the production in Medellin was so dynamic in relative terms, being even larger than production in Bogota?.

[7] Imports to Bogota are imports that are later on distributed to the whole country.

The explanation is relatively simply. The importance of the different markets is one of the relevant aspects but not the most important one, since firms sold their goods in a national market, not in the regions only.

A study done by the Contraloria General de la Republica in 1923 shows that the textile firms sold nearly 55% of total production outside Antioquia (50% for Coltejer). The figures for firms in other sectors were: Coltabaco: 50%; Beer and Beverages: 49%; in Cement there was no plant in Antioquia at that time.

But we have more information available on the topic. According to Propaganda Commercial, in 1922 Coltabaco had plants in Bogota and Medellin, Barranquilla and Manizales, and distribution agencies in Cali. Textiles de Bello (Cia. Antioquena de Tejidos) had "agencies" in Bogota, manizales and cali, Rosellon had agencies in Bogota, Girardot, Honda, Cali and Manizales; Coltejer had agencies in "all the important plazas del pais". In the Sector of Chocolates, Chocolate Cruz Roja, later Nacional de Chocolates, had "10 plants in the principal colombian cities" and some similar was announced by Vidriera de Caldas in the glass sector.

To finish with this issue, in Antioquia Industrial, 1931, it says that Fabricato operates in the markets of Antioquia, Caldas, Valle, Tolima, Huila, Cundinamarca, Boyaca, Santander del Norte y del Sur, Bolivar and Magdalena. Textiles de Bello announced that its products were consumed in larger amounts in the Departments of Antioquia, Caldas, Cundinamarca, Boyaca, Valle and Cauca. Coltejer worked with the markets of Antioquia, Caldas, Cundinamarca, Bolivar, Santander del Sur, Tolima. In beer, Cerveceria Union sold products in Antioquia, part of Santander del Sur, and Caldas[8]. In Chocolates, Nacional de

[8] It is worth noticing that this is the only case in Antioquia in which the firm does not sell in Bogota or Cundinamarca. That area belonged to Bavaria and Germania.

Chocolates had sucursales in Medellin, Bogota, Barranquilla, Bucaramanga, Cali, Manizales, Armenia, Pereira, Ibague, Salamina, Rionegro and Sonson; and agencies in Jerico, Yarumal , Libano, Fresno, Tunja, Chiquinquira and Socorro.

Even in metalmechanics we have something like a national market instead of a regional one. Talleres Apolo sold in "Antioquia and other departments" Cia.Colombiana de Tabaco worked in the whole country ; Vidriera de Caldas specially in Antioquia, Caldas, Tolima, Santander and la Costa Atlantica. In processed food, and this is the only case we have so far, Noel sold biscuits in Antioquia, Caldas, Tolima, Santander del Norte y del Sur, Magdalena, Atlantico y Bolivar.

There is no doubt, after all that information available that firms operated in a national market since very early in the process of industrialization. That also means that in this papers is not advisable to give more importance to regional variables than to "national" variables when studying demand or macroeconomic policy in general.

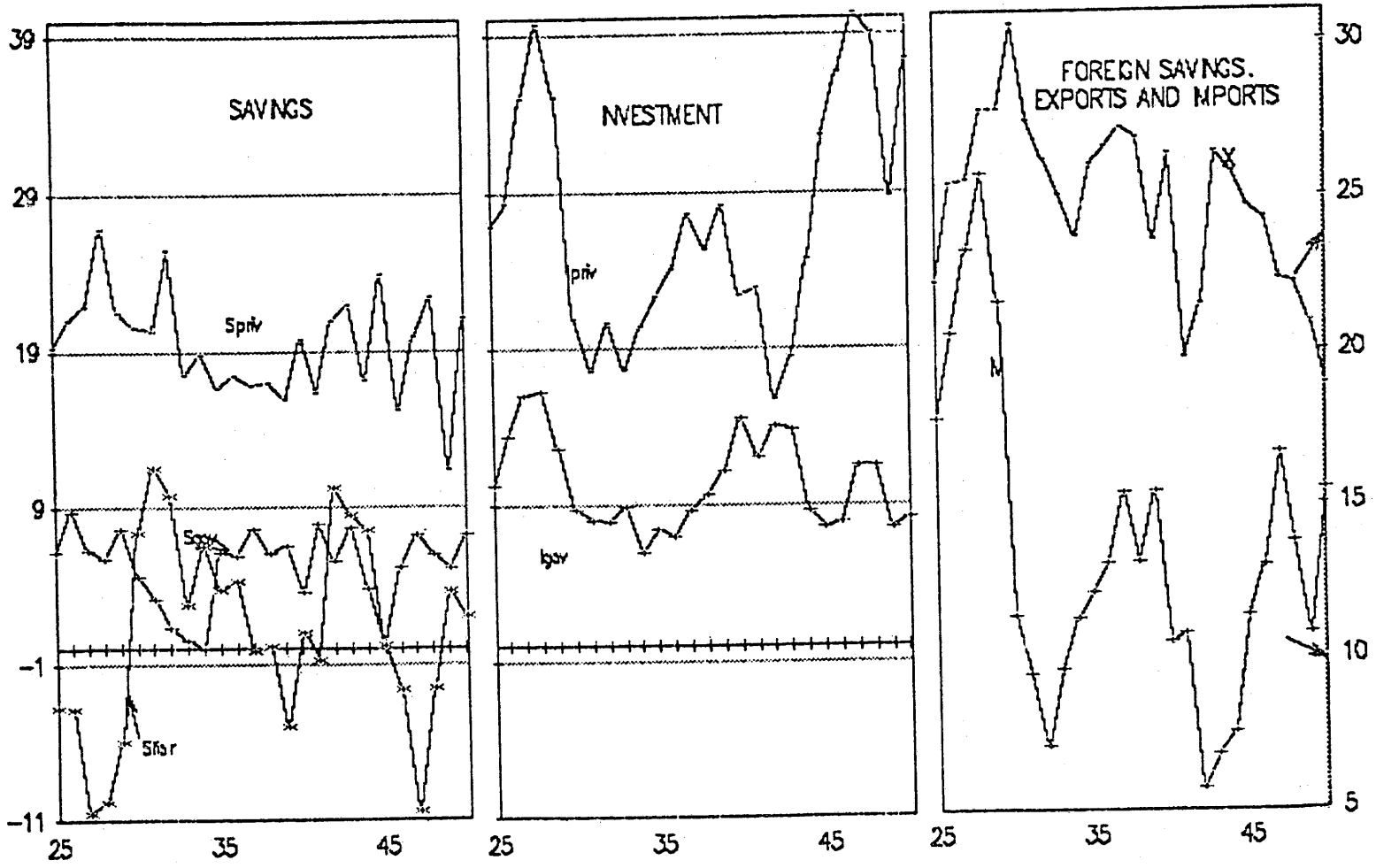
B. SAVINGS AND INVESTMENT IN COLOMBIA.

1. GOVERNMENT SAVINGS AS A STABILIZING ELEMENT.

An important role played by economic policy could be that one associated with savings and investment. Government savings could either increase total savings needed for long run accumulation, or move in the opposite direction of private savings stabilizing total savings. A similar analysis could be done with public investment.

GRAPH 1

SAVINGS AND INVESTMENT IN COLOMBIA 1925–50
% of GDP



SOURCE : ECLA

Graph 1 presents the evolution of savings and investment in colombia. The first part of the Graph brings the evolution of private savings, public savings[9] and Foreign Savings[10]. The figures are percentages of GNP.

First thing we should notice is that private savings is always much larger than either public savings (Sgov) or Foreign Savings (Sfor). Also, there is a negative long run trend for private savings, at least if we take as our base years 1928/29.

As should be expected, foreign savings were the most unstable of the three (coefficient of variation -CV- of 0.17 for 1925-50), with large drops (surpluses in the current account) in 1926-29 and during the second world war, and less in 1938-39, and peaks during the depression and in the years previous to the war, when foreign exchange was very scarce in the country.

The behaviour of foreign savings is partially due to the evolution of exports and imports, and also to the evolution of the other items of the current account, mainly transport costs and the service of the foreign debt. The third part of the Graphic shows the evolution of exports and imports. It indicates, first, that the economy was highly open in 1925-50. The relation between exports and GNP was always larger than 20% (30% in 1929/30), and the relation between imports and GNP representing 13% of GNP on average for the period. Both variables decrease through time however, and the relations are much lower in 1945-50 than

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[9] Sgov = (T-G-TR) where in this case government expenditure includes both current expenditure and investment.

[10] Sfor = -CA where CA: Current Account of the Balance of Payments.

In 1925-30. Exports decrease slowly through time, imports decrease abruptly between 1929 and 1931, and remain low -with high variations- in the following decades.

The most important role played by public savings was to compensate the large oscillations in foreign savings[11] making total savings more stable. But we must recognize that it was not very well sinchronized or that it worked all the time. At best, the compensatory element was present in the first part of the 30s and during the War. But it was not important in the second half of the 20s or in the years previous to the War, when current account of the balance of payments also presented large oscillations.

In relation with investment, public and private investment moved together between 1925 and 1941/42, reinforcing each other. However, after those years private investment increased dramatically and public investment remained fairly constant. As to the levels, we should say that both, savings and investment presented very large levels in the period, compared with future decades. More than 50% of income was invested in 1928/29 and in 1946/50. Even in those years of relatively low dynamism (e.g. the first part of the 30s), ratios were always superior to 25%.

2. THE COMPONENTS OF PUBLIC SAVINGS.

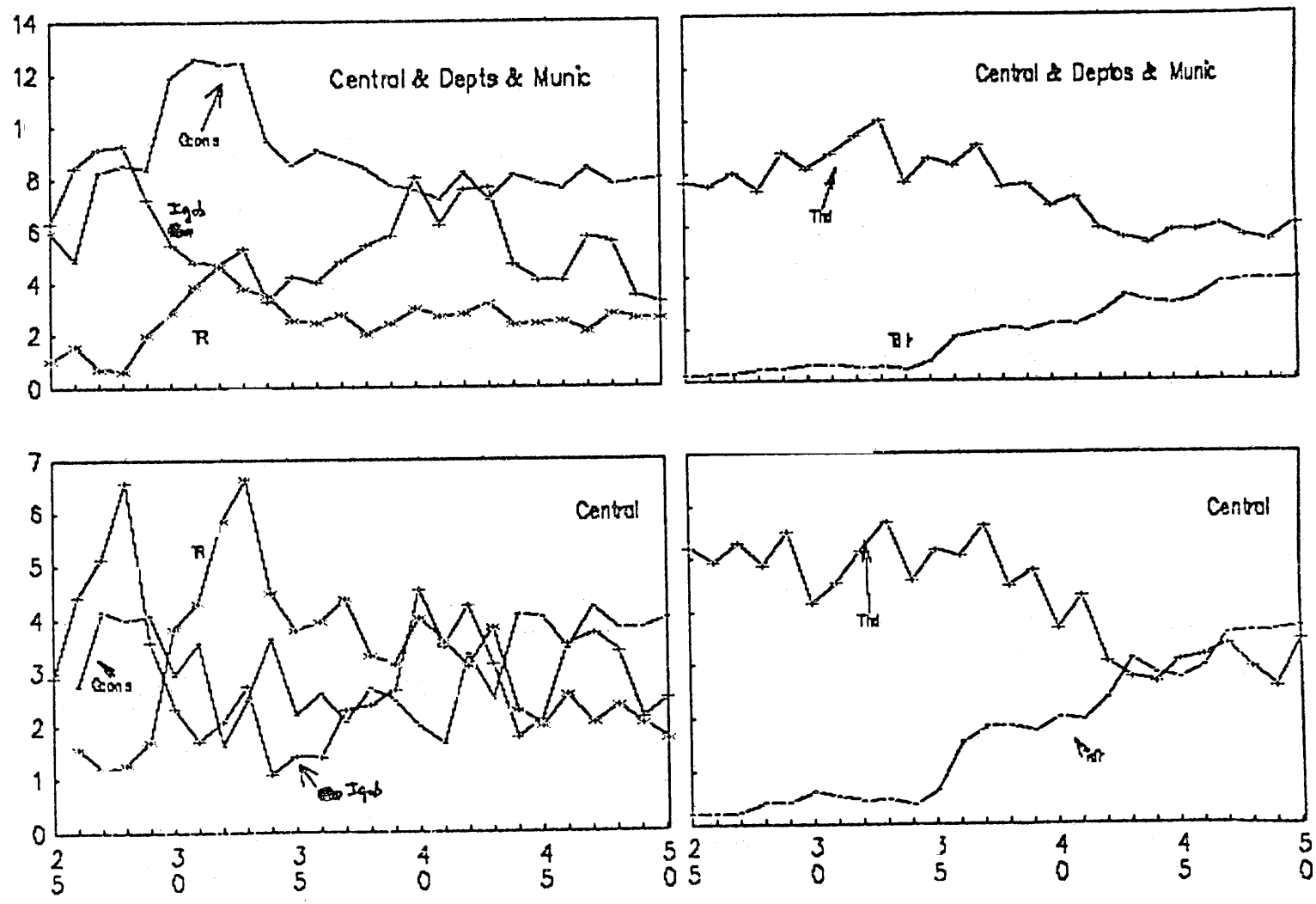
Graph 2 shows the evolution of government expenditures and revenues both for the central government and for the "consolidated" -includes Departments and Municipalities, a more appropriate name could be "National"-. We should have worked only with this "Consolidated" figures, but they are "budget' figures which do no correspond, ex-post, with the real figures

[11] The coefficient of variations -CV- is 6.50 for Sfor, and 0.90 for Sfor + Sgov.

observed after additions are made both to expenditures and to revenues. That is why we also bring the variables for the Central Government.

GRAPH 2

COMPONENTS OF GOVERNMENT EXPENDITURES AND TAXES. (% of Gross National Income)



Source: Table G Pub Expenditures; T Public Revenues; TR: Transfers; cons Consumption; inv: Investment; ind Indirect; dir Direct

Public savings decreased during the depression years due mainly to the behaviour of government current expenditure, since total revenues remained relatively stable as a proportion of National Income. Transfers are also included in Public savings and their evolution is similar to Government current expenditures with peaks in the depression years.

Finally, we must notice that the composition of taxes changed markedly during the period. The importance of indirect taxes present a negative long run trend, direct taxes were non existent before the reforms of 1935, they are equivalent to indirect taxes in the final years of our period.

C. SOURCES OF DEMAND.

In this section we want to investigate the influence of the different sources of demand on aggregate and sectorial production. Demand could come form the external sector (higher exports or lower imports), or from the public sector (Government Expenditures (+) -Current and Investment-, Transfers (+) and Taxes (-).

Chu (1979) shows, using Chenery's methodology on sources of demand, that import substitution was the main source of growth in the period. The other two sources, domestic and foreign -exports- were not as important. But that does not help us too much in answering our questions on economic policy. We are mainly interested in the effect of government expenditures and taxes on demand and growth.

In this section we want to look at the relations between those variables without using any implicit model of growth. The Latin american tradition will give importance to the evolution of commodities in economic growth, and the methodology proposed should through some light on the effect of demand policies. The results should only be taken as preliminary since more robust conclusions need a formal model of growth.

Table 2 presents correlations between some of the variables we want to analyze, and helps us as a first approximation to the analysis of their evolution. Table 3 presents more formal results based in regression analysis.

1. CORRELATION AMONG VARIABLES.

Variables (1)-(11), (20)-(22) of Table 2 are generally associated with economic policy -or its absence- and growth: public expenditures -consolidated and current- and taxes, the amount of pesos paid domestically to buy the coffee crop; variables related to the external sector; money supply; and relative prices.

On the other hand, we have different categories of production: GNP, Total Industrial Production, Intermediate and Final Industrial Goods. We also have production for the specific sectors we are dealing with: beverages, tobacco, textiles, cement. Statistics for the sector of processed food were not as complete though we should include them later on.

The first important conclusion from our Table is that there is a close correlation between almost all the statistics related with production. Thus, looking at Column 12. we see that coefficients are highly significant (**, meaning a significance level of 0.001) for rows (13)-(19). Even for Tobacco, the sector which growth is less associated with GNP growth, the correspondent correlation coefficient is higher than 0.8. What this means is that years of large GNP growth were also years of large industrial growth. Unfortunately, it could also mean that in order to explain industrial growth we have also to explain global growth in the colombian economy.

TABLE 2

CORRELATION COEFFICIENTS FOR SOME VARIABLES RELATED WITH DEMAND AND INDUSTRIAL PRODUCTION

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1)Fiscal Def. Current	1.00	-0.39	-0.44	0.09	-0.38	.4377	-0.01	0.26	0.46	-0.48	.1582	.4222	.4852	.3803	.4490	.3951	.5200**	.4467	.4917*	-.2826	-.5663**	-.1881
(2)Fiscal Deficit.Total	0.39	-1.00	0.15	-0.60	0.09	0.46	0.21	0.16	0.14	0.03	0.07	0.26	0.27	0.20	0.28	0.33	0.22	0.21	0.24	0.36	0.38	0.86
(3)Gov.Current Expenditure	-0.44	-0.15	1.00	0.31	.5534**	.3512	0.28	-0.29	0.08	0.24	.1670	.0632	.0723	.1128	.0474	.1278	.1734	-.0765	-.0393	-.1126	.5367*	.1647
(4)Gov.Total Expenditure	0.09	.6011	0.31	1.00	0.04	.2843	0.01	-0.19	0.26	-0.26	.2045	.1476	.1687	.2132	.1455	.1132	.3818	.1836	.1477	.1085	-0.04	.8392
(5)Transfers -Public-	-0.38	-0.09	.5534*	0.04	1.00	.3735	0.11	-0.26	-0.47	.5300*	.3818	.2611	.2084	.3283	.2670	.2583	.8713	.2774	.1837	-.5225*	.5749**	.2283
(6)Public Revenues	0.44	-0.46	0.35	0.28	0.37	1.0000	0.09	0.11	0.42	-0.31	.4956*	.8305**	.8058**	.7873**	.8063**	.8263**	.7411**	.6665**	.7793**	.6616**	0.83	-.4973*
(7)Coffee Sales	-0.91	-0.21	0.28	0.01	0.11	.0912	1.00	-0.45	0.11	3.12	-.2818	-.2852	-.2541	-.3062	-.2400	-.2006	-.2469	-.2838	-.3021	.1911	0.49	.8231
(8)Exports	0.26	-0.16	-0.29	-0.19	-0.26	.1148	-0.45	1.00	0.16	-0.24	.2744	.3268	.2739	.2666	.2788	.2426	.2813	.1974	.3203	-.2221	-0.49	-.8086
(9)Imports	0.46	-0.14	0.08	0.26	-0.47	.4195	0.11	0.16	1.00	-.8516**	.0105	.2845	.2838	.1968	.2138	.2718	.5167*	.0822	.2369	.1599	-0.43	.6697
(10)Current Account	-0.48	-0.03	0.24	-0.26	.5328**	-.3127	0.12	-0.24	-.8516**	1.00	-.0094	-.2354	-.1946	-.1769	-.2188	-.2098	-.3600	-.0838	-.2808	-.1389	0.33	.1221
(11)M2 (Money Supply).	0.15	-0.07	0.17	0.23	0.39	.4926*	-0.38	0.27	-0.01	-0.09	1.0000	.7357**	.8156**	.8358**	.8042**	.7751**	.6593**	.8118**	.7787**	.7876**	0.01	-.4943
(12)Gross Domestic Product	0.42	-0.26	0.06	0.15	0.26	.8335**	-0.26	0.33	0.28	-0.29	.7357**	1.0000	.9743**	.9618**	.9758**	.9758**	.8118**	.8938**	.9663**	.8249**	-0.17	-.6041*
(13)Industrial Production	0.44	-0.27	0.07	0.16	0.29	.8808**	-0.25	0.27	0.28	-0.19	.8156**	.9743**	1.0000	.9897**	.9987**	.9839**	.8212**	.9835**	.9847**	.8614**	-0.18	-.6084*
(14)Ind.Production. Interm.Goods	0.38	-0.21	0.11	0.21	0.33	.7873**	-0.31	0.27	0.28	-0.18	.8358**	.9618**	.9897**	1.0000	.9834**	.9737**	.8413**	.9251**	.9753**	.8338**	-0.18	-.5606*
(15)Ind.Production. Final Goods	0.45	-0.28	0.05	0.15	0.27	.8063**	-0.24	0.28	0.21	-0.21	.8042**	.9758**	.9987**	.9834**	1.0000	.9843**	.8329**	.8947**	.9738**	.8396**	-0.17	-.5763*
(16)Ind.Production Beverages	0.48	-0.33	0.13	0.11	0.26	.8263**	-0.21	0.29	0.27	-0.21	.7751**	.9758**	.9839**	.9737**	.9843**	1.0000	.8329**	.8947**	.9738**	.8396**	-0.17	-.5763*
(17)Ind.Production. Tobacco	.5208**	-0.22	0.17	0.38	0.87	.7411**	-0.25	0.38	.5167*	-0.36	.6593**	.8118**	.8212**	.8413**	.8181**	.8329**	1.0000	.6598**	.8417**	.5639**	-0.41	-.2698
(18)Ind.Production. Textiles	0.45	-0.21	-0.08	0.18	0.28	.6669**	-0.28	0.29	0.08	-0.08	.8118**	.8938**	.9585**	.9251**	.9527**	.8947**	.6598**	1.0000	.9252**	.8691**	-0.17	-.6421*
(19)Ind.Production. Cement	.4917*	-0.24	-0.04	0.15	0.18	.7793**	-0.38	0.33	0.38	-0.28	.7787**	.9663**	.9847**	.9737**	.9863**	.9738**	.8417**	.9252**	1.0000	.8111**	-0.31	-.6874*
(20)Relat.Prices Cement-Food	-0.28	0.36	-0.11	0.11	-.5225*	-.6616**	0.19	-0.22	0.15	-0.13	-.7876**	-.8249**	-.8614**	-.8388**	-.8593**	-.8396**	-.5639**	-.8601**	-.8111**	1.0000	-0.83	.7159**
(21)Relat.Prices Textiles-Food	-.5663	0.00	.5367*	-0.04	.5749**	0.01	0.49	-0.49	-0.43	0.33	.0055	-.1698	-.1818	-.1888	-.1838	-.1654	-.4953	-.1667	-.3119	-.8269	1.00	-.8379
(22)Relat.Prices Tobacco-Food	-0.19	0.86	0.16	0.04	-0.23	-.4973*	0.02	-0.03	-0.01	0.12	-.4943	-.6041*	-.6084*	-.5606*	-.6247*	-.5838**	-.2698	-.6421*	-.6874*	.7159**	-0.84	1.0000

1-tailed Signif: * - .01 ** - .001
Source:

We must also say, however, that the correlation is not so close once we consider, first, that the sub-period of highest industrial growth was 1932-38 when GNP was not growing fast; on the other side, GNP grew fast in the 20s, when industry did not grow at all. Another point worth of mentioning is that the rates of growth of industry and of the economy as a whole are significantly different: in per-capita terms, the whole economy grew at an annual rate of 1.6% a year, industry at a rate -per-capita- of 6% a year.

A) FISCAL VARIABLES

Public revenues (6) are closely associated with almost any of the variables of production, but the "sign" is the opposite of what we should expect from the demand side. On other words, taxes should play a negative role on production because they decrease disposable income. The result obtained indicates that taxes are closely associated with GNP and GNP with production. Thus, when GNP grows industry and taxes grow.

Aggregate industrial production is not related to any of our policy variables on demand. Also, there are no important relations for the more disagregated levels of production, the only exception being tobacco and cement production which are related with the <Current> Deficit[12].

B) THE EXTERNAL SECTOR

Neither exports nor imports are associated with any other variable considered in Table 2: The only exception will be the positive relation between aggregated imports and tobacco production. Again, the sign is opposite of what should be expected. Neither was the evolution of the current account -negatively associated with the evolution of imports- an

[12] All variables are in constant Col $ of 1950 and in per-capita terms. Also. each variable was in index form, with 1935 as 100.

important factor in the explanation of industrial or aggregated growth. Finally, the results do not improve when we consider domestic coffee sales as a proxy for demand.

But the evolution of real money supply was closely associated with production both aggregate and industrial. This, again, indicates that we have to go deeper in our study of the causes of demand, since, by definition, high power money is closely identified with both, the current account and the fiscal deficit[13] Also, it is very likely that "causality" runs from fiscal deficits and current account towards money than the opposite.

As a first conclusion, then, the results observed by studying simple correlations between variables were rather poor and do not lead to simple hypothesis on growth, neither on fiscal policies nor on the foreign sector. If there is any relation between demand and growth it will be associated to the variables which determine money supply in the less developed countries, mainly the <corrected> fiscal deficit and the <corrected> current account. It could be that, or simply that money supply was important in the determination of aggregate demand. This opens the door to a large debate into which we will not go now. For future research, however, we should explore the relation between money, the current account and the fiscal deficits as in Echavarria (1986) for the Colombian economy in 1970-85. Also, it is important to establish how "endogenous" was money creation in the period, and for that there are standard statistical exercises which should be explored soon.

2. REGRESSIONS AND CAUSALITY.

Even though we do not have a formal model of the economy which takes account of the different iterations among variables, there are at least two problems involved with the description of correlation coefficients. First, regression analysis is more powerful when we

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[13] See J.J Echavarría J.J, "Colombia 1970-85. Management and Consequences of Two large External Shocks" Working Paper No.20, Overseas Development Institute, july, 1987

consider causality because it fixes the other variables when asking for the effect of one of them on growth. Second, and this is a very important problem we have to face in this kind of analysis, simultaneity is always present and the parameters of ordinary least squares are biased.

Table 3 presents the regressions results trying to determine the influence of "demand" on production. As "proxies" for demand we considered two variables: a. The sum of the Current Deficit and the Current Account of the Balance of Payments; b. The sum of the Total Deficit -includes public investment- and the Current Account. Relative prices were also included in some regressions. As dependent variables we considered GNP, Manufactured Goods -total and final-, and sectorial production: beverages and beer, cement, tobacco and textiles.

We run two type of regressions: simple Ordinary Least Square regressions and with Instrumental Variables. Autocorrelation was always corrected, and that means that the instruments utilized were the lagged -1 year- dependent and independent variables in the case of Instrumental Variables, in order to avoid possible biases.

Regressions (33)-(36) are useful to start our analysis, because the dependent variable is "Total Manufactured Goods". The results indicate that our demand variables predict well what happened with production, with both methodologies of regression (R2=0.96; R2 adj=0.96 for regression (33); the "t" coefficients are significant at the 1% level in both OLS and IV methodologies; R2 and R2 adj are not included in the regressions estimated with IVs because they do not mean anything).

Regressions (33)-(36) also show that relative prices do not predict well industrial production, but there are so much problems involved with that variable that we should not put too much attention to it now[14].

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[14] The relative prices used in that case were those of Textiles vs Food, based on the importance of textiles in the whole manufactured sector. In the case of cement and tobacco we used the relative prices of cement and tobacco. Other prices could be important also, and that is why we do not want to put too much attention into that variable in this exercise which is just preliminary as we said before. Thus, the relative price of domestic vs international price could be also important.

As we saw in the analysis of correlation of last Section, there is a close correlation between the different kinds of production, and we should expect that if our "proxy" for demand predicts well what happened with industrial production, it should also predict well other variables related with production in Table 3.

Thus, "demand" also predicts well the evolution of "Final Goods" -regressions (25)-(32), both for OLS and for IVs. The other important point we should observe is that the total deficit is a better "proxy" of demand that the "current" deficit. This result is also encouraging since public investment also represents demand for industrial good. The "signs" are also correct[15].

[15] They are negative for the total deficit and positive for the current deficit just because the figures used for all the series were index numbers (1935 = 100). In the case of the total deficit the base year, 1935, was negative.

D. CROWDING OUT

It was clear from the last Section that demand had an important influence on aggregate growth in general and on industrial growth in particular. The variable used as a "proxy" for demand, the sum of the current account and the public deficit predicted rather well the evolution of industrial production.

Of course, government deficits are not the only way in which fiscal policy affects aggregate demand. Changes in the tax rates that provide incentives or disincentives to different kinds of spending have been and can continue to be at least as important. But we did not consider those fiscal incentives in order to focus on the direct demand effects of government expenditure and taxes. But there could be further effects not considered in our variables of the last Section. In particular, though the present year industrial production could be growing with demand, future growth could be hampered as an effect of lower private investment. We are talking here, of course, of new ideas on the so called "crowding out" effect. More specifically, the paper examines whether the power of such policies is reduced or eliminated by the way in which consumers react to the policies themselves or to the resulting change in government debt.

The early keynesian analysis was based on the extreme assumption that fiscal policies affect consumption only through their impact on current disposable income. This view implied powerful and predictable effects of tax reductions, transfers and deficit-financed government spending. This idea has been modified in two important ways. First, it is now recognized that the extent of the fiscal stimulus is limited by the monetary feed backs through interest rates, reduced real money balances and changes in portfolio composition. It is unlikely that domestic interest rates were completely determined internally, but some

effect should be present. Second, it is widely recognized today that one of the crucial parameters in determining the effect of a fiscal or monetary policy is how consumer see that policy : transitory or permanent. Finally, there is a new-old argument on crowding out which considers debt and taxes to be equivalent. Friedman has said, for example, a that the fiscal burden should not be measured by the amount of taxes society pays, but by the amount and size of fiscal expenditure. The extra-resources needed to finance the deficit are going to be paid by someone someday. This hypothesis could be labelled the "pre-ricardian" hypothesis which basically says that debt and taxes are equivalent in terms of aggregate demand. Of course, there could be other kinds of crowding out when we are in an open economy.

Formally, we could present the discussion on "crowding out" in the following terms:[16]

From the basic identity :

$$S_p + S_g + S_f = I \qquad (1)$$

where:

I: Private Investment

S_p: Private Savings

S_g: Public Sector Savings (T-Gc-TR)

T: Public Revenues

Gc: Current Expenditure

TR: Transfers

Sf: Foreign Savings (-CA)

[16] See W.H. Buiter, "Measurement of the public sector deficit and its implications for policy evaluation and design", IMF Staff Papers, june, 1983. Buiter, 1977; Spencer and Yohe, 1970

CA: Current Account of the Balance of Payments[17]

From formula (1) there are three alternatives when government expenditures (G) increase or, even more general, when S_g decreases:

a. Conventional Crowding-Out: I decreases

Higher government expenditures increase the interest rate and decrease private investment.

b. Monetary Approach Crowding Out: Sf increases.

The whole effect of government deficits is felt of changes in the international reserves of the country.

c.keynesian traditional approach: S_p increases because national income also increases

Higher government expenditures imply reductions in private consumption for a constant level of national income. Multiplier effects and second round income effects could imply, however, that aggregate consumption turns out to be larger than before the expansion in government expenditure.

d. Finally, the "pre-ricardian" crowding out: S_p increases even for a constant level of national income.

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[17] The demonstration is straightforward: From $C+I+G+X-M=C+S_p+(T-TR)$. we have: $I=(T-G-TR)+Sp+(M-X)$

The consumer will see the larger government expenditure as future taxes and will automatically reduce consumption since the present value of his disposable income has decreased.

The results of Table 4[18] seem to show that the last type of crowding out was not important in our period, since consumption -and savings- did not change as a result of larger government expenditures -lower taxes-, except through the traditional keynesian mechanism of income variations. Only permanent disposable income had an important effect on consumption[19].

What else could we say on the relation between Sg, Sp, Sf and i?. The results the regressions between the variables just mentioned are really poor. The only significant correlation present is that one between private investment and the current account of the balance of pay ments, indicating that investment was constrained by the availability of foreign exchange in the period.

We must conclude this Section saying that there are no additional "crowding out" effects which could change the results of the previous Section on the influence on deficits (and the external sector) on production and growth.

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[18] Based on M. Feldstein, "Government Deficit an Aggregate Damand", Journal of Monetary Economics, jan, 1982, pp.1-20

[19] We still have to work more on the empirical estimations of the consumption function since the R_2 are still very low, and the variables used for wealth are not significant. We should also try year to year income, not only permanent, since Cuddington (1986), for example, found very important transitory effects on consumption for the period 1950-85. See J.T.Cuddington, "Commodity Booms, Macroeconomic Stabilization and Trade Reform in Colombia" (mimeo), 1986

TABLE 4

EFFECTS OF GOVERNMENT EXPENDITURE, TRANSFERS AND TAXES ON PRIVATE CONSUMPTION

PRIVATE CONSUMPTION

VS	Constant	Yd	Yn	G	T	TR	W1	W2	M2	R2	adj.R2	DW
(1)	-10.92	0.91		-0.25	0.42	-0.09	0.20			0.72		2.00
	(0.1)	(1.0)		(0.1)	0.6	(0.1)	(0.4)					
	0.9	0.4		0.9	0.5	0.9	0.7					
(2)	-0.9	1.2		-0.5	0.4	0.0	0.1		-0.1	0.8	0.6	2.0
	(0.0)	(2.2)		(0.5)	(0.6)	(0.0)	(0.4)		(0.6)			
	1.0	0.0		0.6	0.6	1.0	0.7		0.6			
(3)	12.2		1.3	-0.8	0.3	0.2	0.1			0.7		1.9
	(0.2)		(1.7)	(0.7)	(0.4)	(0.3)	(0.2)					
	0.9		0.1	0.5	0.7	0.8	0.9					
(4)	11.6		1.3	-0.8	0.3	0.2	0.0		0.0	0.7	0.6	2.0
	(0.2)		(2.5)	(0.8)	(0.4)	(0.4)	(0.2)		(0.2)			
	0.9		0.0	0.5	0.7	0.7	0.9		0.8			
(5)	-15.4	0.9		-0.3	0.5	0.0		0.2		0.7		2.0
	(0.1)	(0.6)		(0.2)	(0.6)	(0.0)		(0.4)				
	0.9	0.4		0.9	0.5	1.0		0.7				
(6)	-7.6	1.1		-0.4	0.4	0.0		0.1	-0.1	0.8	0.6	2.1
	(0.1)	(2.1)		(0.5)	(0.6)	(0.1)		(0.5)	(0.6)			
	0.9	0.1		0.6	0.6	0.9		0.6	0.5			
(7)	9.8		1.2	-0.8	0.4	0.2		0.1		0.7		1.9
	(0.1)		(1.4)	(0.8)	(0.4)	(0.4)		(0.2)				
	0.9		0.2	0.4	0.7	0.7		0.9				
(8)	7.0		1.3	-0.8	0.3	0.2		0.1	0.0	0.8	0.6	2.0
	(0.1)		(2.5)	(0.9)	(0.4)	(0.5)		(0.2)	(0.3)			
	0.9		0.0	0.4	0.7	0.7		0.8	0.8			

'd. Proxy for Disposable Income -see below-

/n. National Income

i. Total Government Expenditure. Includes Public Investment. Includes Deparments and Municipalities

f. Total Revenues. Includes non Tax revenues. It also includes Departments and Municipalities

fR. Public Transfers.

/1. First Proxy for Real Wealth. W1=Public Domestic Debt

W2. Second Proxy for Wealth. W2=Public Domestic Debt+Private Sector Deposits in the Central Bank

Sources. Table .

Notes and Methodology.

Every variable is real-C$ of 1950- and per-capita. Also, it has been converted to an index with base 1935

All regressions were run using Instrumental Variables to avoid problems of simultaneity

E. CORRECTING THE DEFICIT.

1. BUDGET LEGISLATION AND PROCEDURE20.

The colombian budget system in the period was based in The original Kemmerer's budget law of 1923, on its revision (also by Kemmerer) of 1931, on several changes but mainly those of 1945 and, finally, on Decree No. 164 of January 24, 1950.

The two Kemmerer Missions tried to assure a balanced budget: the executive, when submitting his budget to Congress, must tie expenditures to estimated revenues -borrowing excluded-.

It was clear in both reforms -1923 and 1931- that a balance budget should be assured. Accordingly, it was provided that the Executive when submitting his budget to Congress must hold expenditures within the limits of estimated revenue, other than borrowing. Throughout the following discussion, the term "revenue" is defined to include tax yield, fees, proceeds from public enterprises, etc, but to exclude borrowing. Only expenditures on public services which were self-liquidating (in the sense of allowing a fee income sufficient to ser5rvice the debt incurred) were exempted from this rule. Next, it was provided that revenues -except for new sources- should be estimated to equal the average yield of the three preceding years. this was to prevent willful overestimation of vield. In order to prevent the budgetary balance from being upset by congress, the law forbade congress to increase expenditures above the proposed total without also providing for new revenue. Congress

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[20] Based on L.Currie, The Basis of a Development Program for Colombia, IBRD, John Hopkins Press, 19511951, pp.267-270

was, however, to be permitted to change expenditure items within the limits of the proposed total. In order to assure that the budgetary balance should not be upset in the process of budget execution, the law provided that the administration may not make expenditures in ex cess of those provided in the budget.

As may be expected, these over rigid rules were not adhered to and had to be amended. Kemmerer's revision of 1931 aimed at introducing some flexibility. The new law permitted the government to make additional expenditures in excess of appropriations if this appeared necessary while Congress was not in session. Such additional expenditures, however, were subject to the limitations that new provisions for revenue must be made at the same time. With unfortunate lack of clarity the Act referred to the requirement for new revenue as "nuevo ingreso" without making it clear whether the term "ingreso" was to include borrowing or only revenues as defined above. While the former interpretation came to be adopted, it is evident that the narrow interpretation of revenue was Kemmerers's intention in the 1931 Act. It did not in any way relax the basic requirement that the Government should present a balanced budget. Indeed, the 1923 provision that strictly self-liquidating public works might be loan finances was dropped in the 1931 law. Nor was there any relaxation of the estimating formula.

A further liberalization was introduced by the law of 1944 which abandoned the rigid formula for yield estimating. The government was then free to base estimates upon its appraisal of economic conditions, as long as there was an adequate explanation of the estimate. Congress, similarly, assumed the right to revise such estimates. Notwithstanding these adjustments, budget law and practice remained highly unsatisfactory if budget balances were going to be achieved. Notwithstanding the seemingly clear and still applicable requirement of the 1931 law that proposed expenditures should not exceed estimated revenues, the administration has consistently included provision for loan finance as well as

revenues the budget proposal. Also, in contradiction to the intent of the 1931 Act, the Executive showed an increasing tendency to undertake additional (extra-budgetary) expenditures on the basis of loan finance. Much of this tendency to resort to additional credit, in turn, may be traced to the provision of the law which holds that congress may shift expenditure items but not increase the total. To circumvent this provision, Congress adopted the practice of substituting non-essential expenditure items for essential items proposed by the government. As a result, the government had to undertake these essential expenditures, which had been dropped from the budget, as the basis of special credit. In recent years additional expenditures of this kind rose to nearly 40% of appropriations, this resulting in a sever distortion of the whole budgeting process. The liberalization of the estimating procedure provided for in the 1945 law also led to abuse on the part of Congress. Congress frequently raised yield estimates without justification, merely to permit raising the overall level of appropriation within the limitations imposed by the law.. Recently, the general rule that the proposed budget must be balanced has been dropped..

From that quotation from the Informe Currie, it was clear that though Kemmerer tried to impose severe restrictions on the budget, the rule was always violated ex-post. Fiscal Balance was the doctrine 21, but government expenditures were always required. Rich people did not want to pay taxes and chronic deficits were present[22]

2. CORRECTING THE DEFICIT

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[21] Esteban Jaramillo, in his Tratado..on Public Finances (p. 10), writes :En la economia privada el individuo debe proponerse amoldar sus gastos a sus entradas; y en la economia public el Estado debe, por lo general, acomodar las entradas del Tesoro a los gastos necesarios. .... But balance is always the rule. See E. Jaramillo, Tratado de Hacienda Pública, 4th ed.

[22] On the history of colombian taxes and revenues see M. Deas, "The Fiscal Problems of Nineteenth-Century Colombia", Journal of Latin American Studies, 14, 2, pp.287-328 and J. Bernal, "Las Finanzas del Sector Público Central en los Años Veinte y Treinta en Colombia", Coyuntura Económica, june, 1984

In the final chapter of his book on the period 1919-1939 A.Lewis considers that economic policy was completely inefficient in the United States and England. What must be explained, the author argues, is how the capitalist system stagnated for more than 10 years -until the end of the Second World War- despite the huge fiscal deficits observed.

C.Brown (19) showed that the deficits observed were due not to expansionary economic policy but to automatic forces operating in the economy. In particular, if taxes responded to income, as they did, and income was decreasing abruptly, it was only logical to expect automatic deficits during depression years. Taking that factor on account, Brown showed that, instead of being expansionary, economic policies were contractionary during the depression[23]. The alternative proposed by Brown was to evaluate the change in the budget surplus (deficits) occurring at an income level corresponding to full employment.

Sometimes, and that is our case in this Section, we are interested in the discretionary policy followed by the government, and not in the fiscal deficit (superavit) as such, a combination of discretionary and automatic elements. We require some of deciding whether a given fiscal change is exerting an expansionary or contractionary influence and whether such influence can be categorized as strong or weak.

Following that pioneer work, there have been interesting discussions on how to measure the deficits (superavits) in order to obtain a better evaluation of fiscal stance by the government. Authors like Buiter[24] propose to evaluate the deficit in real terms and for that is not enough

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[23] See A.Blinder and R.Solow, "Analytical Foundations of Fiscal Policy", in Blinder et.al, The Economics of Public Finances, Washington, The Brookings Institution, 1974

[24] See W.H. Buiter "Measurement of the public sector deficit and its implications for policy evaluation and design", IMF Staff Papers, june, 1983; also, R.Eisner and P.Pieper, "A New View of the Federal Debt and Budget Deficits", American Economic Review, march, 1984; F. De Leeuw and T.M. Holloway, 1983, "Cyclical Adjustment of the Federal Budget and Federal Debt", Survey of Current Business, Dec.; F. de Leeuw, et.al, 1980, "The High Employment Budget: New E stimates, 1955-80", Survey of Current Business, nov; F. De Leeuw and T.M Holloway, "Cyclical Adjustment of the Federal Budget and Federal Debt", The Survey of Current Business, dec, 1983, pp. 25-40

is not enough to measure the deficit in constant units, since there is an additional effect of the inflation on the debt. The existence of inflation implies that government internal debt is lower. The other correction that has been proposed is related to the exchange rate for similar reasons. If the devaluation of the exchange rate is less than the domestic inflation, the government has to pay less real resources abroad.

The results presented in Table 5 and in Graphs 3 and 4 pretend to throw light on the difficult issue of fiscal stance. Table 5 presents a first approximation to revenues and expenditures elasticities using data for the 25 years of the period. Works done elsewhere on this issue are much more sophisticated. On the one hand, they try to measure "high employment" income starting from a measure of unemployment and of the unemployment rate which will correspond to the high employment level estimated. Second, on measuring elasticities many studies work with complete and sophisticated models for the whole economy[25].

The first columns of Table 5 bring long run elasticities for government expenditures, both current and investment. We also included (G2) an estimate for the long run elasticities for the national government -includes departments and municipalities- which basically tries to correct the data for the departments and municipalities[26].

Long run income elasticity of expenditure oscillates between 0.3 and 0.5 for national expenditures, though figures are much higher for the central government. The results on taxes also seem relatively plausible, oscillating between 0.7 and 1. However this aggregate figure is the combination of a very high income elasticity for income -direct in general- taxes and a low income elasticity for indirect taxes.

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[25] OECD calculates long run elasticities from the INTERLINK model with its separate sub-models for the different countries. Other studies on tax elasticities require much more information than what was available for our period.

[26] The problem with the data for the departments and municipalities, both for government expenditures and revenues, is that they are budget data, meaning that "gastos" and "ingresos" extraordinarios are not included. It is clear from the data on the central government that those extraordinary expenditures and taxes were very important, mainly in the years of the depression of the 30s. Thus G2 and T2 in Table 5 assume that the relation between ordinary and extraordinary expenditures and taxes is similar for the central government and for the departments and municipalities.

TABLE 5

INCOME ELASTICITIES OF EXPENDITURES AND TAXES

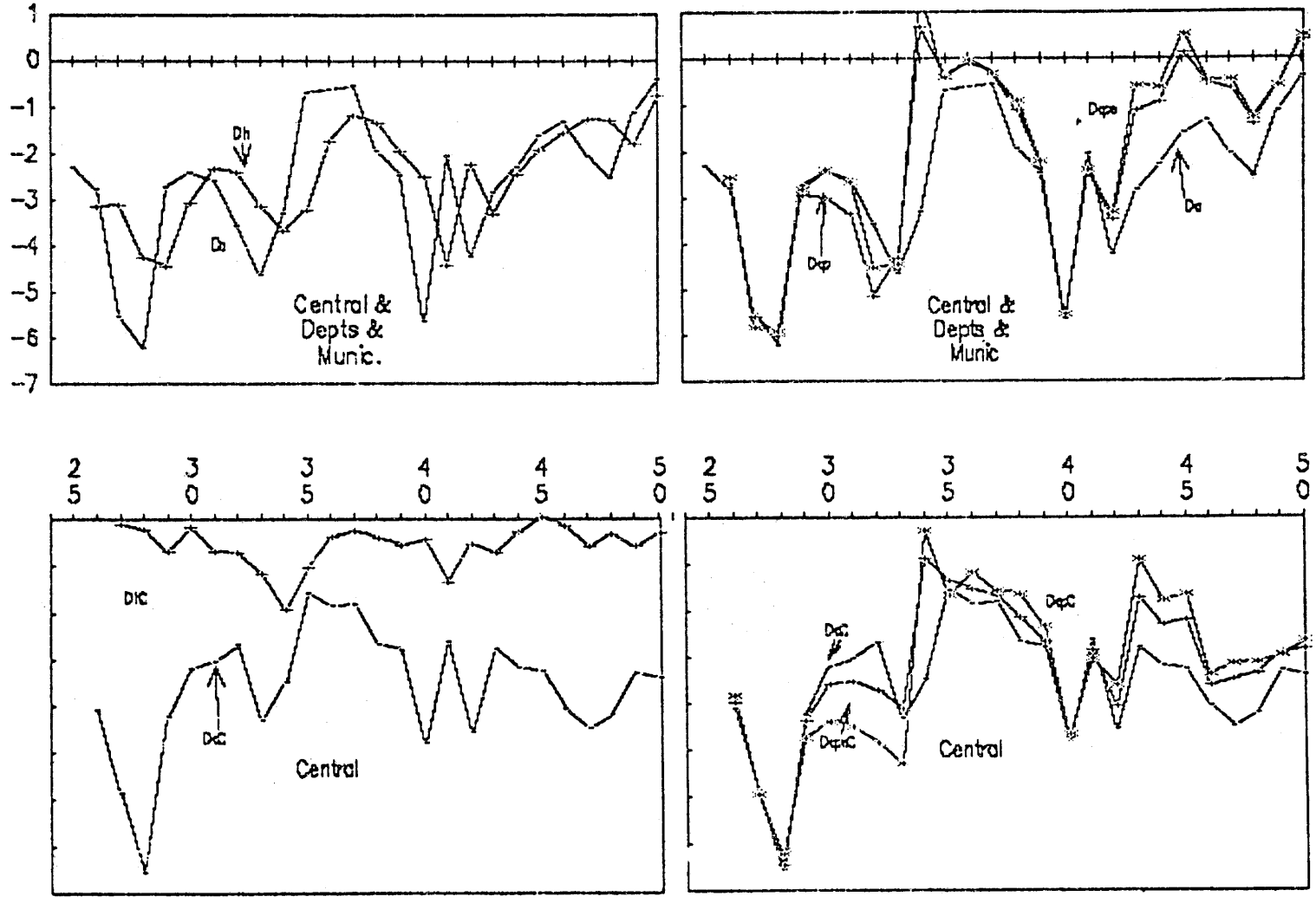
	GDP	GC	Ginv	G	G2	TR	GcC	GinvC	TRC	Ttot	T2tot	Tdir	Tind	Totr	TtotC	TdirC	TindC	TotrC
Constant		1.53	0.59	1.69	3.27	-1.37	-6.89	-6.89	14.07	0.34	1.69	-6.24	2.25	5.34	-4.99	-24.23	2.64	3.93
Income Elasticity		0.51	0.56	0.55	0.37	0.72	1.38	1.37	-1.88	0.72	0.56	1.36	0.48	-0.81	1.25	3.49	0.28	0.82
Rho		0.45	0.67	0.29	0.21	0.72	0.38	0.64	0.63	0.57	0.59	0.92	0.55	0.67	0.23	0.74	0.43	0.25
R2		0.76	0.58	0.75	0.39	0.69	0.59	0.58	0.75	0.88	0.81	0.96	0.58	0.68	0.91	0.96	0.25	0.87
Adj R2		0.73	0.54	0.73	0.33	0.66	0.55	0.54	0.73	0.86	0.79	0.96	0.54	0.56	0.90	0.95	0.18	-0.82
D-W		1.58	1.71	1.44	1.53	1.34	2.11	1.65	1.96	1.83	1.84	1.63	2.18	1.42	1.93	1.53	1.93	1.73

G:Government Expenditures; T: Taxes or REvenues; TR: Transferences -includes interest payments on the debt-; C:Central Government; inv:Investment; c:Current-consumption-;
2: Assuming that the relation between budget and effective expenditures and taxes is similar for the central government and for the "Consolidated"

Source: Cepal Annex, 1986 and author's calculations

GRAPH 3

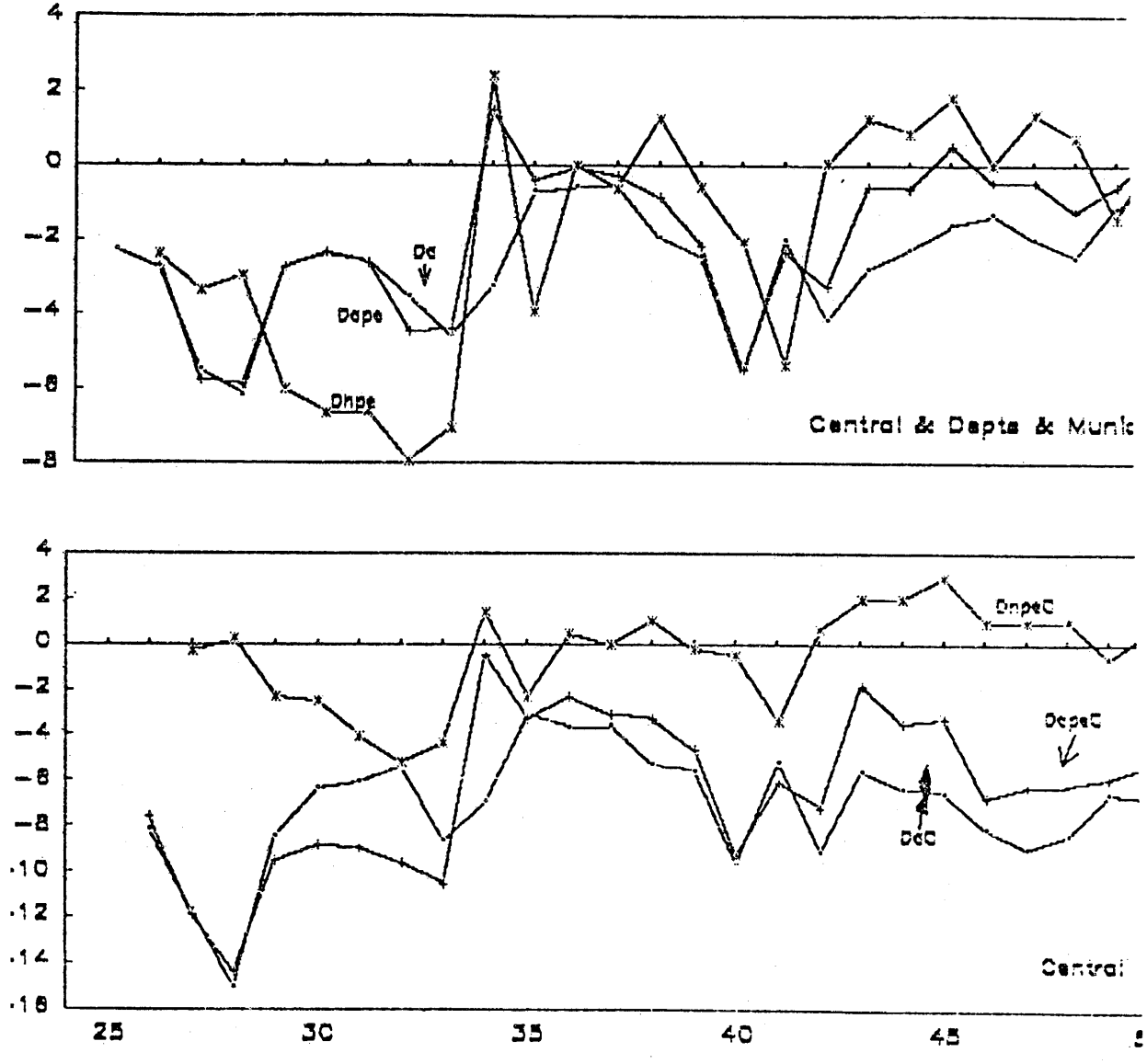
ADJUSTING THE DEFICITS(−) OR SUPERAVITS(+)



Source: Table . D Deficits(−) or Superavits(+) ; a Actual; h High Employment; p Price −Inflation−; e Exchange Rate;

GRAPH 4

ACTUAL AND ADJUSTED DEFICITIS(−) OR SUPERAVITS(+)



Source: Table . D: Public Deficit (G+TR−T). where G and T: Public Expenditures (Includes Investment) and Revenues; a:Actual; h:High Employment; p:Inflation; e:Exchange Rate

Using those elasticities we estimated the high employment deficits or superavits presented in Graph 3. The two Graphs on the left present a comparison between both estimates. The other two Graphs also corrects for inflation and the devaluation of the real exchange rate.

Since figures for the central government are much more reliable than for the aggregate, we should start with the lower side of the two graphs on the left. The results indicate, basically, that most of the variations observed in the deficits(-) or superavits (+) were due to automatic movements of G and T. In fact, if income would have been stable all the time, deficits would have been substantially lower than observed, which agrees with what we just said in the sense that fiscal balance was the goal of most policy makers of the period. Oscillations in the budget were not so much due to fiscal policy as to movements in aggregate income.

There is a second important point related with our initial results on the subject. If we construct an index with the relation between DhC and DaC[27]. wee will get very different results from other authors with important contributions in the area.

Ocampo, for example, considers that there were three sub-periods in the years of the Depression in Colombia. An initial period which he calls of orthodox management, previous to 1931; an heterodox period from 1931 to 1934; and a phase of "stabilization with social reform" following the latter year.

Our results, however, indicate that the large deficits observed after 1931 were mainly due to the cycle. From the ration (DaC/DhC) we could say:

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[27] (DaC/DhC) it will be large when a truly expansionary policy was followed.

-they were only two short periods for which economic policy was not closely associated with a balanced "high employment" budget: 1927-1928 (very expansionary), and 1945-46 (very contractionist). Actual -observed- deficits and superavits were more associated with automatic movements during the cycle that with anything else.

-The pattern observed is just opposite to what Ocampo describes. From an expansionary policy in 1927-28 we go into more and more restrictive policies year by year starting in 1930. If there was any compensatory policy it was followed in 1929-30.

-There is no important change in policies in 1932, and that invalidates both Ocampo's comments on the subject but also Urrutia's who considers that the War with Peru meant keynesianism before Keynes in our country.

-The figures for the consolidated or national government do not present the large differences we observed in the case of the central government and that is something we have to analyze deeper in the near future.

Graph 4 brings together the observed deficit (Da), and the corrected deficits: (Dhpe) and (Dape) now including corrections for high employment, prices and exchange rate. The Graph in the top includes Departments and Municipalities, the Graph in the bottom is only for the Central Government.

-our new results confirm the previous ones in the sense that the corrected deficits were much lower than the observed ones, and that the most expansionary policies were followed during the 20s, not during the 30s as an antyciclical mechanism.

BIBLIOGRAPHY

Arango M, 1982, El Café en Colombia. 1930-58. Producción, Circulación y Política. Carlos Valencia Editores.

Artis M.J, 1979, "Recent Developments in the Theory of Fiscal Policy: A Survey", in S.T. Cook and P.M.Jackson, 1979.

Barro " ", in H.Gómez (et.al), (Eds), Lecturas sobre Moneda y Banca, Bogotá, Fedesarrollo

Bernal J, "Las Finanzas del Sector P[ublico Central en los A[nos Veinte y Treinta en Colombia", Coyuntura Económica, june, 1984

Blinder A and R.Solow, "Analytical Foundations of Fiscal Policy", in Blinder et.al. The Economics of Public Finances, Washington, The Brookings Institution, 1974

Brown E.C, 1956, "Fiscal Policy in the Thirties: A Reappraisal". American Economic Review, sept.

Brunner K, Ed, The Great Depression Revisited, Boston,1981

Buiter W.H, "Measurement of the public sector deficit and its implications for policy evaluation and design", IMF Staff Papers, june, 1983

Calderon C, 1905, La Cuestión Monetaria en Colombia, Madrid.

Commodity Research Bureau Inc, 1948, Commodity Yearbook, 1948-.

Cook S.T and P.M. Jackson, 1979, Current Issues in Fiscal Policy, 1979, Martin Rutson and Co.

Cruz Santos A, 1947, "Encuesta Continental", 1947

Currie D, 1979, "Stabilization Policy in an Open Economy", in S.T. Cook and P.M. Jackson, 1979.

Currie L, The Basis of a Development Program for Colombia, IBRD, John Hopkins Press, 1951

De Leeuw F and T.M. Holloway, 1983, "Cyclical Adjustment of the Federal Budget and Federal Debt", Survey of Current Business, Dec.

De Leeuw F, et.al, 1980, "The High Employment Budget: New Estimates, 1955-80", Survey of Current Business, nov.

De Leeuw Frank and T.M Holloway, "Cyclical Adjustment of the Federal Budget and Federal Debt", The Survey of Current Business, dec, 1983, pp. 25-40

Deas M, "The Fiscal Problems of Nineteenth-Century Colombia", Journal of Latin American Studies, 14, 2, pp.287-328

Echavarría J.J, "Colombia 1970-85. Management and Consequences of Two large External Shocks" Working Paper No.20, Overseas Development Institute, july, 1987

ECLA, El Desarrollo Económico de Colombia y sus Principales Problemas. 1956.

Eisner R and P.Pieper, "A New View of the Federal Debt and Budget Deficits", American Economic Review, march, 1984

FEDESARROLLO, 1977, Economía Cafetera Colombiana.

Feldstein M, "Government Deficit an Aggregate Damand", Journal of Monetary Economics, Jan, 1982, pp.1-20

Hoffman H.T, "Marketing Areas in Colombia", US.Department of Commerce, Bureau of Foreign and Domestic Comerce, International Reference Service, SEPT, 1945

International Bank for Reconstruction and Development, 1950, The Basis of A Development Program for Colombia, The Johns Hopkins Press.

International Monetary Fund, International Financial Statistics, 1948

Jaramillo E, Tratado de Hacienda Pública, 4th ed.

League of Nations, Economic Intelligence Service, Public Finances, 1928-37, Geneva, 1937.

League of Nations. Economic Intellince Service. World Production and Prices, 1937/38. Geneva.

Lopez Toro A, Migración y Cambio Social en Antioquia en el Siglo XIX, Bogotá, CEDE, Universidad de los Andes, 1970..

Lora E, 1984, "Factores Explicativos del Desequilibirio Comercial Externo, 1980-83" Revista de Planeación y Desarrollo, abril-septiembre.

Mejía F, 198X, "La Posición Fiscal de la Nación y la Actividad Económica, Revista de Planeación y Desarrollo,

Miller M, 197X, "Measuring the Stance of Fiscal Policy", Oxford Review of Economic Policy, Vol.1, No.1.

Monsalve D, Colombia Cafetera. Información General de la República y Estadística de la Industria del Café.

Muller P. and R. Price, 1984, "Structural Budget Deficits and Fiscal Stance", Paper No. 15, OECD, unpublished.

Ocampo J.A. and S.Montenegro, 1984, Crísis Mundial, Protección e Industrialización, Fondo Editorial, CEREC..

Palacios M, 1983, El Café en Colombia. 1850-1970. Una Historia Económica, Social y Política,

Patiño A, La Prosperidad a Debe y la Gran Crísis. 1925-1935. Capítulos de Historia Económica de Colombia. Banco de la República, Bogotá.

Posada C.E, "La Crísis del Capitalismo Mundial y la Deflación en Colombia", Cuadernos Colombianos, Nos.10,11 and 12. .

Safford "Significación de los Antioquenos en el desarrollo Económico Colombiano", Anuario Colombiano de Historia Social y de la Cultura, V(1967), pp.49-69

Shaw G.K, 1979, "The Measurement of Fiscal Influence", in S.T. Cook and P.M. Jackson, 1979.

Siegel J.J, 1979, "Inflation-Induced Distortions in Government and Private Saving Statistics", Review of Economics and Statistics, .

Temin P, Did monetary forces cause the great depression?, New York, Norton, 1976

Thorp R, 1984, Latin America in the 1930's. The Role of the Periphery in World Crisis. St.Antony's/Macmillan Series.

Tobin J and W.H. Buiter, 1980, "Fiscal and Monetary Policies, Capital Formation, and Economic Activity", Ch.3 in The Government and Capital Formation, ed. by G.M.Von Furstenberg, Series on Capital Investment and Saving, Vol2, Cambridge, Mass, 1980.

Torres G, 1945, Historia de la Moneda en Colombia, Bogotá.

Tovar B, 1984, La Intervención Económica del Estado en Colombia, 1914-1936, Biblioteca Banco Popular, Textos Universitarios. Bogotá.

United Nations, ECLA, Indicadores del PIB,

United Nations. Statistical Yearbook. 1948 and 1952.

United States, Bureau of the Census. Historical Statistics of the United States. Bicentenial Edition.

Urrutia M. and M.Arrubia, 1970, Compendio de Estadísticas Históricas de Colombia. Universidad Nacional de Colombia.