

# U.S. Direct Investment Values in Mexico: A Comparison of Mexican and U.S. Data

ALDO R. FLORES QUIROGA

James W. Wilkie and Carlos Alberto Contreras, eds., *Statistical Abstract of Latin America*, vol. 29, part 1 (Los Angeles: UCLA Latin American Center Publications, University of California, 1991).



Interest in the study of direct foreign investment has increased significantly during the twentieth century. The effects of the activities of international corporations in host countries have stimulated a number of studies. For example, research on direct foreign investment has centered on its impact on balance of payments, technological transfers, industrial organization, national and international politics, labor relations, economic growth, and economic welfare.

In the case of Mexico, the debate generated by direct foreign investment has yielded an extensive body of literature, which grew impressively during the 1970s.<sup>1</sup> Students of direct foreign investment in Mexico have attempted to understand the main determinants of the activities of foreign corporations in Mexico, as well as their general effects on principal economic and social indicators. Most of this research has concentrated on U.S. direct investment (USDI) because it represents the greatest participation in the total value of direct foreign investment in Mexico.<sup>2</sup>

Empirical research on USDI has relied mainly on statistics published by two institutions: Banco de México (Banxico) and the U.S. Department of Commerce (USDC). Banxico provides information on USDI from 1938 to the present in *Indicadores Económicos*<sup>3</sup> and in *Serie de Estadísticas Históricas*.<sup>4</sup> USDC publishes similar series in the *Statistical Abstract of the United States*<sup>5</sup> and in *U.S. Investments Abroad*<sup>6</sup> with information dating from 1929. These sources have provided most of the available information on the operation of U.S. companies in Mexico. Their coverage concentrates on balance sheets, income statements, and inter-

national transactions of these companies. Thus, the information describes a company's operations and their effects on the balance of payments.

The main problem with the Banxico and USDC sources is that their estimates of USDI differ. A review of the values of U.S. investments in Mexico reported by Banxico and USDC demonstrates that Banxico figures rarely coincide with those of USDC, and that occasionally the differences may be of considerable magnitude. For example, Banxico's estimate of USDI value in the trade sector for the year 1952 is 2.7 times larger than the same year's value estimated by USDC, as Table E1 illustrates. In the petroleum industry, Banxico's estimate of USDI is only 23 percent of the figure estimated by USDC. (All tables are found in the Appendix.)

It is evident that these differences in estimates, if taken at face value, may affect the interpretations of research on USDI in Mexico. In the examples above, the relevance of trade investments as a percentage of total USDI in Mexico in 1952 varies substantially according to the source utilized. Using Banxico data, trade investments represent almost 19 percent of total USDI in Mexico, as seen in Table E6. But using USDC data, trade investments account for almost 8 percent of total USDI, as demonstrated in Table E16. The picture of USDI in these two sectors is, therefore, clearly different depending on the source of information.

In spite of the data differences, many studies of USDI in Mexico have not analyzed these disparities.<sup>7</sup> Researchers have not explained why they have preferred to use Banxico's information over USDC data, or vice versa. In very few instances have they explicitly recognized the differences between the information supplied in these sources. For example, Bernardo Sepúlveda and Antonio Chumacero, in *La Inversión Extranjera en México*,<sup>8</sup> noted differences between the figures of Banxico and USDC, but they did not

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<sup>1</sup>For a bibliography of studies on this topic see "La Inversión Extranjera Directa en México: Una Bibliografía," *Comercio Exterior* 38:4 (April 1988), 336-344.

<sup>2</sup>Tables E9, E12, and E16 contain information on U.S. participation in total U.S. investment in Mexico.

<sup>3</sup>Banco de México, *Indicadores Económicos*, various issues.

<sup>4</sup>Banco de México, *Serie de Estadísticas Históricas: Inversión Extranjera Directa*, 1982 (two volumes).

<sup>5</sup>U.S. Department of Commerce, *Statistical Abstract of the United States*, various issues.

<sup>6</sup>U.S. Department of Commerce, *U.S. Investments Abroad*, various issues.

<sup>7</sup>The following works are examples of studies lacking this type of discussion: Manuel Aguilera Gómez, *La Desnacionalización de la Economía Mexicana* (México: Fondo de Cultura Económica, 1975); José Ramón Medina Cervantes, *El Estado Mexicano entre la Inversión Extranjera Directa y los Grupos Privados de Empresarios* (México: Premia, 1984); Rogelio Ramírez de la O., *De la Improvisación al Fracaso: La Política de Inversión Extranjera en México* (México: Océano-Centro de Ecodesarrollo, 1983); Alonso Aguilar M., ed., *El Capital Extranjero en México* (México: Editorial Nuestro Tiempo, 1986).

<sup>8</sup>Bernardo Sepúlveda and Antonio Chumacero, *La Inversión Extranjera en México* (México: Fondo de Cultura Económica, 1973).

discuss them in detail, nor did they provide grounds for comparison between both sources. They only suggested reasons for the differences. The picture of USDI in Mexico that they painted was almost completely based on Banxico data.

In this analysis I demonstrate the importance of USDI data differences, as reported by Banxico and USDC. I compare investment values of six industries: Manufacturing, Mining, Petroleum, Trade, Transportation, and Other Industries. This comparison demonstrates explicitly, from a sample of thirty years (1950-79), how USDI values in each industry evolve according to the estimates of both Banxico and USDC. As a result, the comparison facilitates the identification of years in which discrepancies in information between both sources occur, or in which data discrepancies are minimal. This should alert researchers to the possibility that by using only one source their analyses may be limited.

The data generated by Banxico and USDC represent two perspectives of USDI. These vary according to the intention with which the statistics are developed,<sup>9</sup> and depend on the method of compilation used by each source.<sup>10</sup> Consequently, it is important to recognize the implications of each perspective, in terms of what Banxico and USDC are actually measuring. Estimates from both sources may be "correct" if seen in isolation, but one type of estimate may be better suited than another to a specific type of analysis. Exploring the definitions that sustain each source's perspective is a first step in determining when Banxico and USDC data must be used.

In the following sections I discuss and analyze the methodology used to compare USDI data from Banxico and USDC, data differences by industry from both sources, and possible reasons for USDI data disparities between Banxico and USDC. The last section presents an exercise to test whether some of the explanations advanced in the preceding sections can reduce data differences.

### Methodology

The industries I have selected for comparison of USDI values, as reported by Banxico and USDC, are Manufacturing, Mining, Petroleum, Trade, Transportation, and Other Industries. These divisions correspond in general to the

U.N.'s STIC guidelines.<sup>11</sup> Thirty years are sampled (1950-79). To make data comparable, Banxico's figures are expressed in dollars using the current year's average exchange rate, as reported by the IMF.<sup>12</sup> Data are deflated using the U.S. export price index,<sup>13</sup> with 1970 as the base year, thus permitting a better view of the actual value of the investment in each year.

Investment values of each industry are contrasted using the following calculations: ratios, indexes, and specific industry investments as percentage of total U.S. direct investment. These measures have been chosen because they graphically illustrate problems in the data and because they help to formulate explanations for data discrepancies. In particular, ratios illustrate differences in magnitude for the values reported by both sources. Indexes eliminate the effects of differences in absolute values between sources and concentrate on the general trend of each series. Percentage participation of total investment illustrates how conjectures about the importance of one sector depend on the data being used. Of course, given the similarities of ratios and indexes, the problems revealed by one measure must be confirmed by the other, as long as one series is not a multiple of the other. Indexes provide additional information: their compared behavior can determine whether discrepancies between these series of data are substantial, as will be explained below.

Ratios highlight the "problem figures." In dividing the figures of Banxico by those of USDC, the percentage differences for each number can be seen. If the ratio is higher than 1, Banxico's data are higher than those of USDC. Conversely, if the ratio is lower than 1, Banxico data are lower than those of USDC. A threshold must be established to decide whether the ratios indicate if the series are substantially different, or if the differences are minimal and unimportant. I suggest that a difference no larger than 10 percent between figures is acceptable because Banxico and USDC use different definitions and data-processing methodologies.

Indexes have been chosen to explore the possibility that data differences are affected by external factors. If indexes from both sources share the same levels while the ratios are more or less than 1, but remain similar on average through time, then the existence of consistent differences (probably owing to methodological differences) may be suggested. For example, if ratios for the same time series indicate estimates that differ in magnitude approximately 50 percent between sources for every year, by using an index the emphasis of this difference is reduced. Both series will seem to behave in the same manner. Therefore, if indexes are the same, while data are different, a problem of scale

<sup>9</sup>Agencies in charge of the development and processing of statistics generally apply special emphasis to the data that are useful for their activities. Trade agencies concentrate on trade statistics; labor agencies on employment and other labor market indicators; fiscal agencies on income statements and balance sheets; and so forth. Banxico's publications of USDI emphasize balance of payments accounting, while USDC's publications consider, in addition to capital movements, trade and employment activities.

<sup>10</sup>Agencies compile statistics according to different methods. Company surveys are a common way to collect information on USDI, but they are not the only option. For example, cash flows can also be used.

<sup>11</sup>STIC (Standard Trade and Industry Classification) can be found in several publications of the United Nations.

<sup>12</sup>International Monetary Fund, *International Financial Statistics*, various issues.

<sup>13</sup>SALA, 28-3331.

may be suggested to summarize disparities between statistics from Banxico and USDC. Indexes are also useful for observing the magnitude of data changes from year to year. If the magnitudes or the direction of changes are not the same between both indexes, the picture of USDI will definitely vary according to the source used.

Given the lack of information from both sources, correlation analysis of the components in each definition was not possible.<sup>14</sup> Correlates would have been the ideal measure, because they would help to identify if the "noise" between series is a consequence of the sources' methodology. Data could then have been reorganized in order to reduce the differences.

#### Description of the Series

Throughout the thirty-year period considered, the USDC changed its methodology, definitions, and/or data presentation on three occasions (1959, 1962, 1977), while Banxico altered its formulation once (1974).<sup>15</sup> Thus, a comparison of any time series of USDI in Mexico published by both institutions is very difficult because it is affected by these changes.<sup>16</sup>

Although Banxico defines direct foreign investment as "investment aimed at the acquisition of a long-term inter-

est in an enterprise exploited in an economy which is not that of the investor,"<sup>17</sup> USDC defines direct investment as that which occurs when "a person in one country has a lasting interest in, and a degree of influence over the management of, a business enterprise in another country."<sup>18</sup> Prior to 1962, USDC identified ownership (or "control") as possession by one person of 25 percent or more of the voting securities of a company. In 1962, USDC began to distinguish between investments which allowed for control of 10 percent or more of the company's voting securities and those which permitted control of 25 percent or more of these shares. Apparently, the intent of this change was to distinguish between "associated" companies, which corresponded to the 10 percent limit, and "allied" companies, which corresponded to the 25 percent limit. However, in the *Statistical Abstract of the United States*, USDC published only those USDI values that corresponded to the 25 percent limit. After 1977, the values reported were lowered to the 10 percent limit.<sup>19</sup>

#### Total U.S. Investment in Mexico

Total U.S. investment figures from both sources are similar. Table E1 depicts the ratios of Banxico data to USDC data. From this information, the calculated mean ratio of total investment was 1.13. This implies that, on average, Banxico's U.S. total direct investment in Mexico was 13 percent higher than that of USDC. Of the thirty years under consideration, only five (1955, 1956, 1957, 1962, and 1963) were problematic, as the ratios presented a range of variation from 25 to 32 percent.

Tables E2 and E3 are indexes calculated using data from Banxico and USDC respectively. The indexes of total U.S. direct investment in Mexico are shown in Figure E:2. These data are interesting because when compared to the real values depicted in Figure E:1, and to the ratios shown in Table E1, the disparity between the values of both series diminishes. This suggests the presence of a factor that may explain the difference between the series of Banxico and USDC. The indexes in Figure E:2 depict all values as compared to the 1970 total USDI value. In doing so, the absolute comparison of Figure E:1 is substituted for a relative com-

<sup>14</sup>Banxico publishes information on USDI values for every country since 1938. However, balance sheet information is limited to the years 1976-79. USDC, conversely, publishes that information in its benchmark surveys, but many information gaps exist.

<sup>15</sup>Methodologies change because new information or new refined concepts are available to the researcher in each of these institutions. This procedure provides, in most cases, increasingly accurate information. It should be pointed out, however, that parallel or alternative series to the existing ones are not developed. This description would have been more precise if both sources had maintained a series according to the original methodology, in addition to a new series using the improved methods.

<sup>16</sup>It is not desirable to compare data gathered from different samples and based on different definitions. National agencies which collect information related to USDI sometimes use different techniques, samples, or definitions to process data. As a consequence, data cannot be compared. The following example illustrates this point: Statistics of USDI values published by Nacional Financiera in *La Economía Mexicana en Cifras* (NAFINSA, Mexico, different issues) do not coincide with those of Banxico. This discrepancy between Mexican data occurs because NAFINSA uses information from the Comisión Nacional de Inversiones Extranjeras (CNIE), and not from Banxico. Yet, CNIE and Banxico use the same survey to process the data they publish. Why their values do not coincide is not clear. Moreover, estimates from the Secretaría de Comercio y Fomento Industrial (SECOFI) are not compatible with similar estimates from Banxico. It is evident that, by mixing information from these three sources, the consistency of any analysis diminishes. Regarding U.S. data, Vukmanic, Czinkota, and Ricks (1985) point out how the identification of U.S. companies with investments abroad varies from source to source. Little overlapping exists in studies that list names of U.S. international corporations. However, we can only work with existing data, and some data are better than no data.

<sup>17</sup>*Serie de Estadísticas Históricas*, 1982.

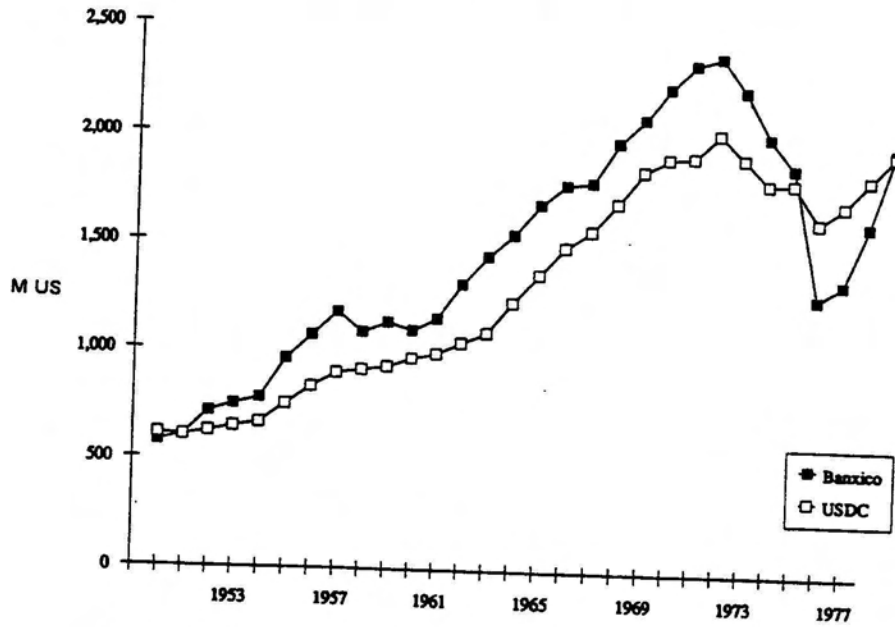
<sup>18</sup>U.S. Department of Commerce, *U.S. Investments Abroad*, 1977, 1981.

<sup>19</sup>It must be noted that changes or adjustments in definitions are very subtle. For example, in *U.S. Direct Investment Abroad, 1977*, USDC explains: "Before the 1977 benchmark survey, when direct foreign investment was defined from a national viewpoint, investment in publicly held companies was considered U.S. investment abroad if the combined interests of all U.S. persons were at least 50 percent." Given that such percentages of ownership are unlikely to be present, according to USDC, we can expect that data compiled with only the 25 percent limit are not substantially different from those that include investments of 50 percent or more.

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Figure E:1

TWO PERSPECTIVES OF REAL U.S. TOTAL DIRECT INVESTMENT IN MEXICO, 1950-79

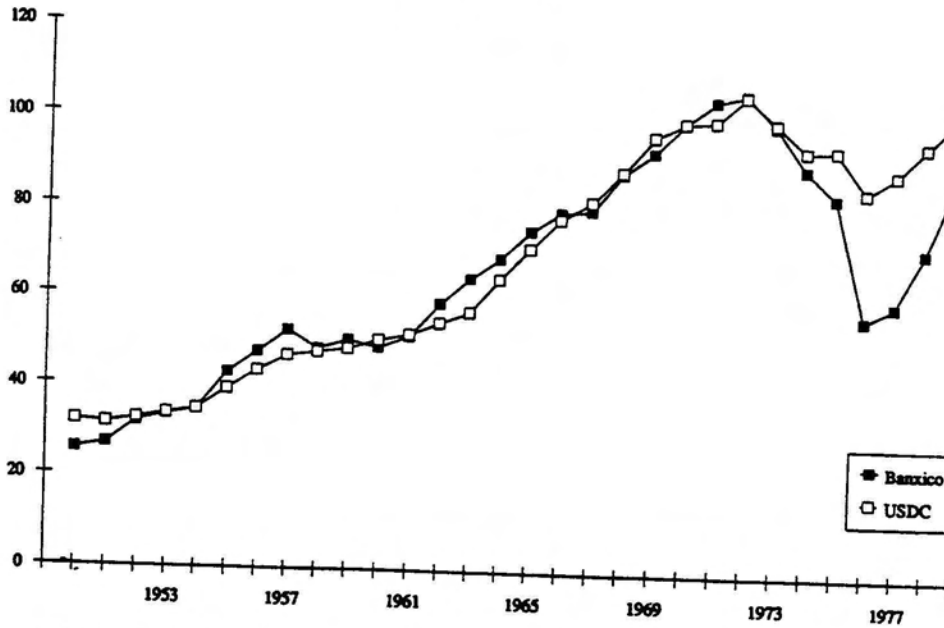


SOURCE: Tables E14 and E16.

Figure E:2

TWO INDEXES OF REAL TOTAL U.S. DIRECT INVESTMENT IN MEXICO, 1950-79

(1970 = 100)

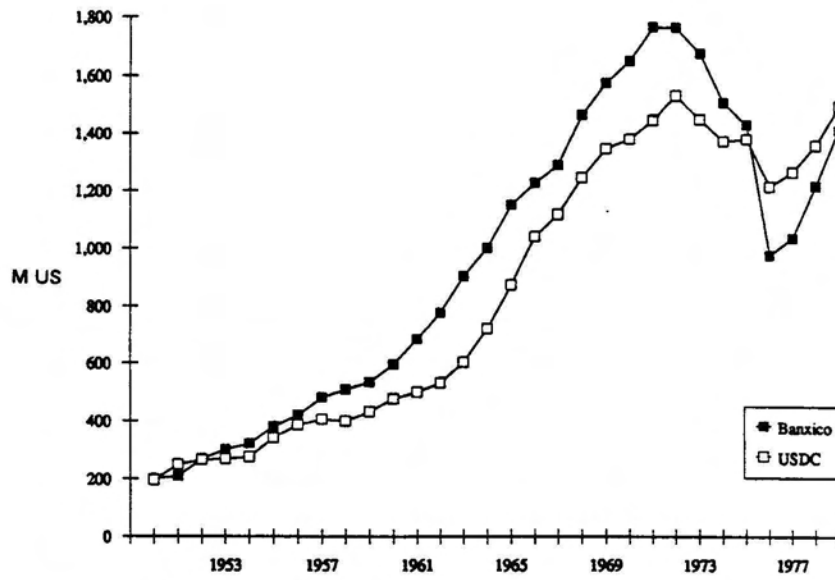


SOURCE: Tables E2 and E3.

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Figure E:3

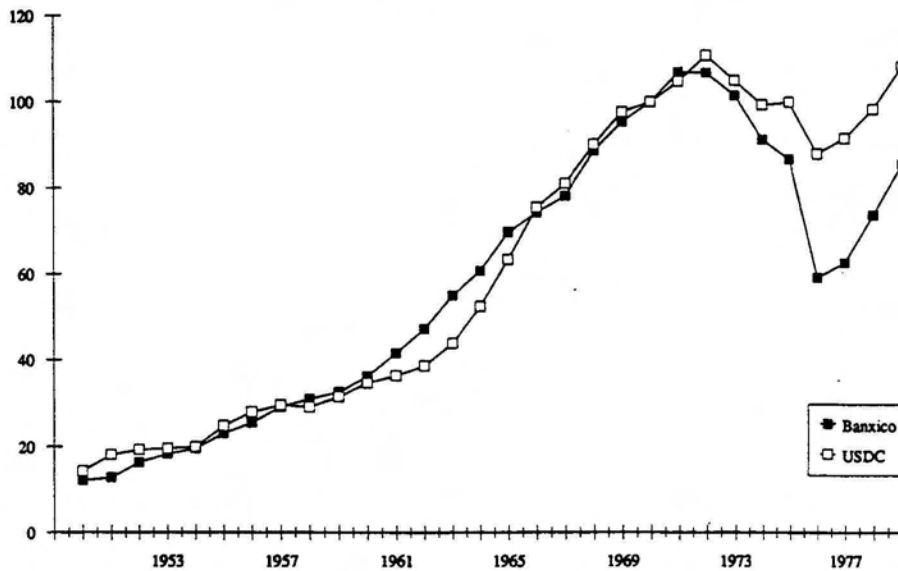
**TWO PERSPECTIVES OF REAL U.S. MANUFACTURING INVESTMENT IN MEXICO, 1950-79**



SOURCE: Tables E14 and E18.

Figure E:4

**TWO INDEXES OF U.S. MANUFACTURING INVESTMENT IN MEXICO, 1950-79  
(1970 = 100)**

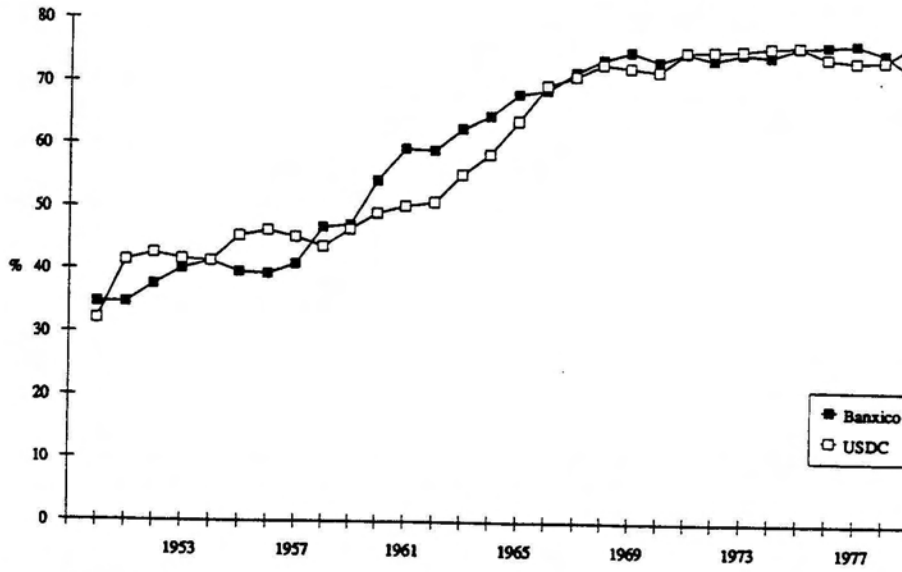


SOURCE: Tables E2 and E3.

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Figure E:5

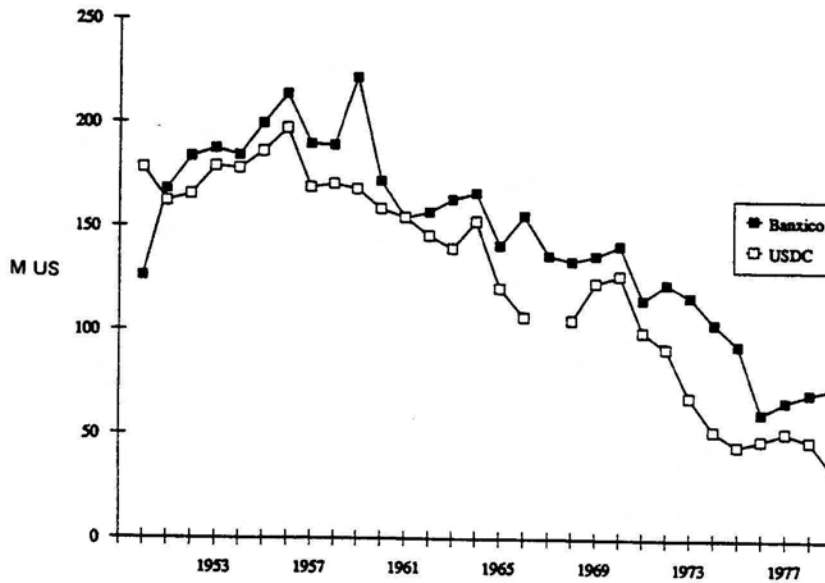
**TWO PERSPECTIVES OF U.S. MANUFACTURING INVESTMENT IN MEXICO AS PERCENTAGE OF U.S. TOTAL INVESTMENT IN MEXICO, 1950-79**



SOURCE: Tables E13 and E16.

Figure E:6

**TWO PERSPECTIVES OF REAL U.S. MINING INVESTMENT IN MEXICO, 1950-79**



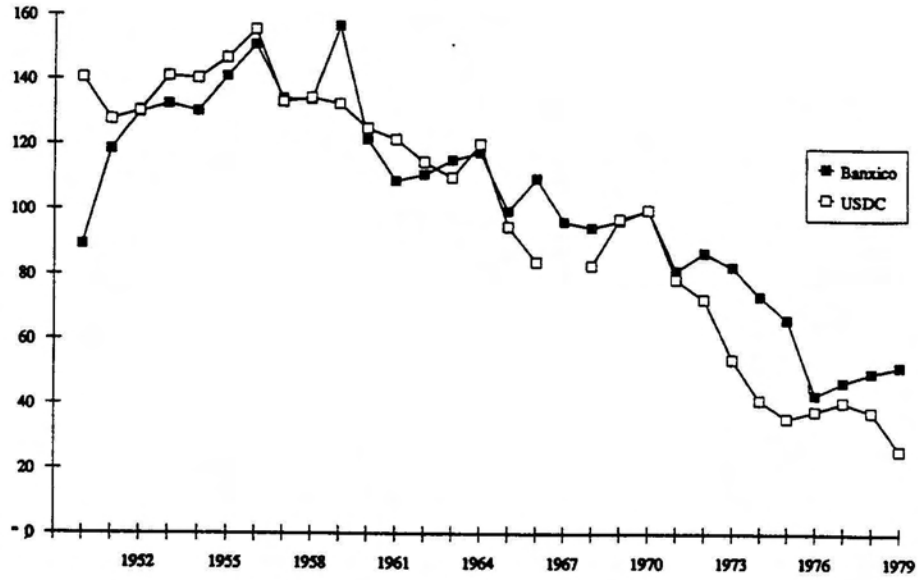
SOURCE: Tables E14 and E18.



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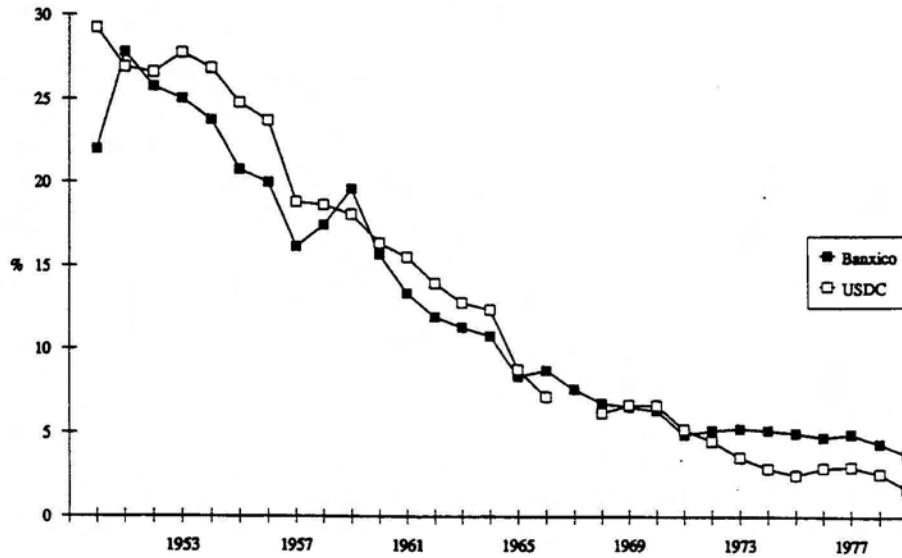
Figure E:7

**TWO INDEXES OF U.S. MINING INVESTMENT  
IN MEXICO, 1950-79**  
(1970 = 100)



SOURCE: Tables E2 and E3.

**Figure E:8**  
**TWO PERSPECTIVES OF U.S. MINING  
INVESTMENT IN MEXICO, AS PERCENTAGE OF  
TOTAL U.S. DIRECT INVESTMENT IN MEXICO,  
1950-79**



SOURCE: Tables E12 and E16.

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parison. Given that the ratios in Table E1 have a similar magnitude, the differences in real USDI data are reduced with the use of indexes, and data disparities become unimportant for most years.

### Manufacturing Investments

The manufacturing investment series behave similarly to those of total investment, as can be seen in Figures E:3, E:4, and E:5. These investments account for approximately 60 percent of total USDI during the period reviewed. Thus, the same differences described for total USDI are apparent in the ratios and the indexes depicted in Tables E2 and E3. Again, if indexes are considered, the series from both sources show an equivalent trend. In fact, the average ratio of manufacturing investment is 1.14, which is virtually equal to 1.13, the figure for total investment. In only two periods, from 1962 to 1967 and from 1970 to 1979, did the indexes show greater disparities.

Comparison of Figures E:4 and E:5 reveals a peculiarity. In Figure E:5, which graphs manufacturing investments as a percentage of total investment, the differences in the values of Banxico and USDC calculations are minimal from 1970 to 1979. These are the same years in which the indexes demonstrate a sharp contrast in Figure E:4.

### Mining Investments

Investments in the mining sector are analyzed in Figures E:6, E:7 and E:8 (and Tables E1, E2, and E3). The data include: the value of real U.S. mining investment, an index of U.S. mining investment, and the percentage of total USDI. Banxico and USDC data are less compatible for this category than for manufacturing investment. The mean ratio calculated from Table E1 is 1.26, with a standard deviation of .34, and a range of variation from .71 to 2.23. Figure E:7 shows that using indexes can reduce the differences between the series, but the impact is not significant. Again, the biggest differences occur after 1970. Figure E:8 illustrates the diminishing participation of mining as calculated from both sources. Data differences between sources are less in this graph than in Figures E:6 and E:7. Figures E:6 and E:8 show how the position of the Banxico series changes in relation to the USDC series. This demonstrates that the way data are manipulated certainly affects the magnitude of the series.

### Petroleum

Banxico's values of real U.S. petroleum investments are generally below USDC's values for the same series (Figure E:9). The mean ratio calculated from Table E1 is .84, with a standard deviation of .322. Roughly, Banxico's data have been 27 percent lower than USDC's data, and the range of variation has gone from 71 to 223 percent. This indicates an amazing disparity in estimates of petroleum investments. Figure E:10 shows that indexes do not hide the differences in the data from both sources, and that the most serious

differences appear from 1956 to 1961. When the series are seen as a percentage of total investment, as in Figure E:11, the differences become even more striking.

### Trade

The trade investment series is graphed in Figures E:12, E:13, and E:14. Ratios from Table E1 demonstrate differences between the data in Figure E:12. On average, Banxico's data are 1.54 higher than those of USDC, with a standard deviation of .677. This high standard deviation accounts for the erratic behavior of the graphs, for which ratios range from .32 to 2.7. These numbers render sharp differences in the estimates of both sources. As will be explained later, the problem lies within USDC, which uses a different classification than does Banxico. Figure E:14 is particularly fascinating: USDC portrays trade investment rising as a percentage of total investment, while Banxico shows falling investment levels. One must ask, therefore, which institution tracks the trend correctly.

### Transportation

Figures E:15, E:16 and E:17 present U.S. transportation investment trends in the transportation sector. USDC data demonstrate greater amounts of U.S. investment in this sector than do Banxico data, when measured in real terms. The mean ratio for both series is .3 with a standard deviation of .159, and a range of variation from .01 to .72. This demonstrates, as in the trade figures, the extreme variability of estimations generated in both sources. Reasons for these discrepancies will be given in the next section. Whereas the indexes in Figure E:16 contrast from 1953 to 1959, the years after 1961 are characterized by similarities in the indexes. The same pattern appears in Figure E:17 as in Figure E:1, and the different perspectives derived from using different sources can be appreciated: before 1960, the participation of transportation investments in total investment was, according to Banxico data, 5 percent on average, while according to USDC data it was 18 percent on average.

### Other Industries

The data for the Other Industries category prove to be the most difficult to compare (Figures E:18, E:19, and E:20). Except for the first seven years, the data show contrasting patterns. The huge variability of these estimates is clearly reflected in the mean ratio of .463 with a standard deviation of .408 and a range of variation from 0 to 1.62. Indexes in Figure E:19 are only similar from 1950 to 1960; then they move in opposite directions.

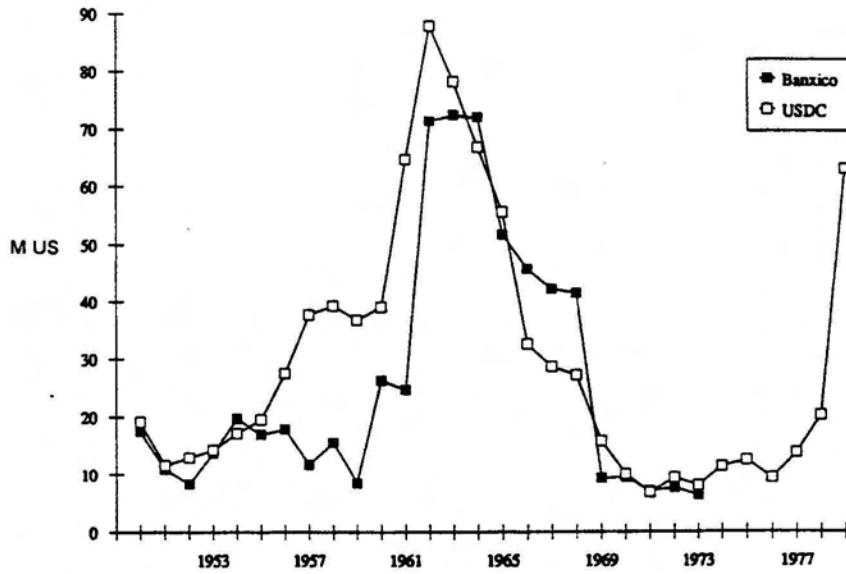
### Explaining the Differences

Banxico and USDC provide little information that might help to explain the sharp contrasts between the series described in the previous section. The publications of each source sketch the methodology used in collecting the infor-

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Figure E:9

**TWO PERSPECTIVES OF REAL U.S. PETROLEUM INVESTMENT IN MEXICO, 1950-79**

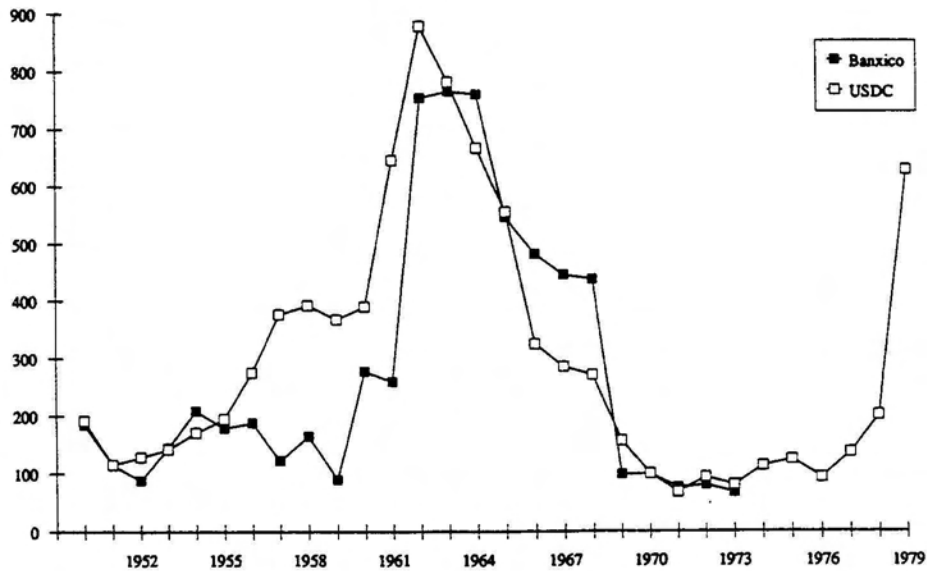


SOURCE: Tables E14 and E18.

Figure E:10

**TWO INDEXES OF REAL U.S. PETROLEUM INVESTMENT IN MEXICO, 1950-79**

(1970 = 100)

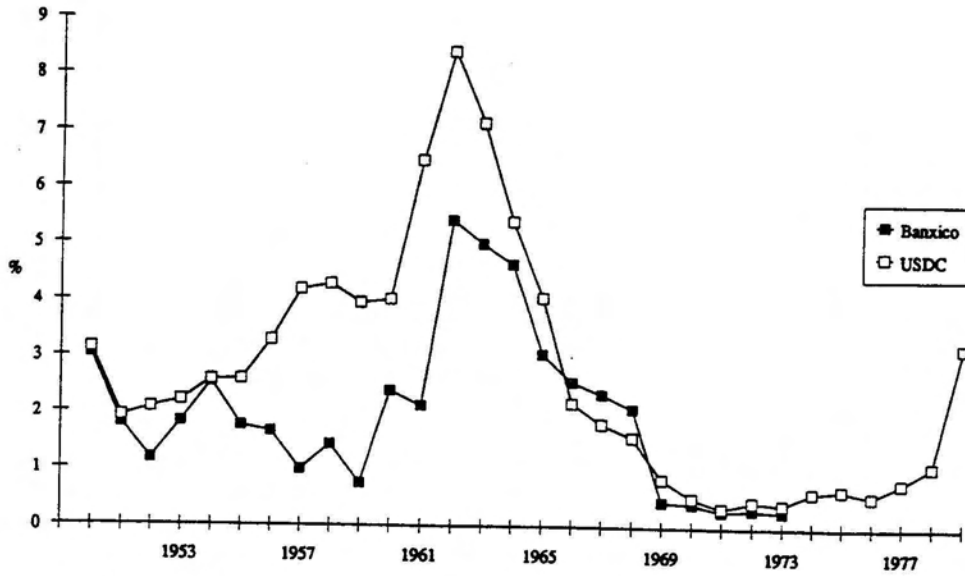


SOURCE: Tables E2 and E3.

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Figure E:11

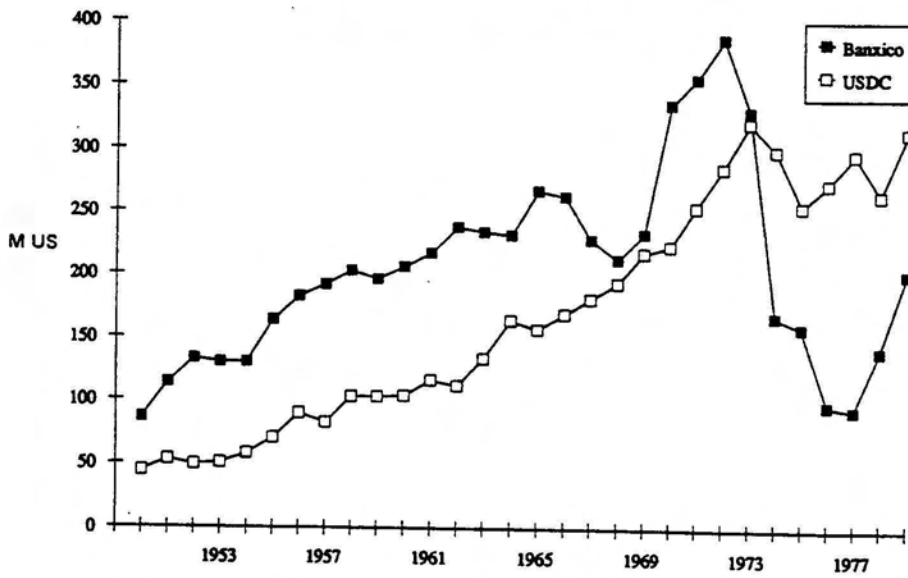
**TWO PERSPECTIVES OF U.S. PETROLEUM INVESTMENT IN MEXICO, AS PERCENTAGE OF TOTAL U.S. INVESTMENT IN MEXICO, 1950-79**



SOURCE: Tables E12 and E16.

Figure E:12

**TWO PERSPECTIVES OF REAL U.S. TRADE INVESTMENT IN MEXICO, 1950-79**

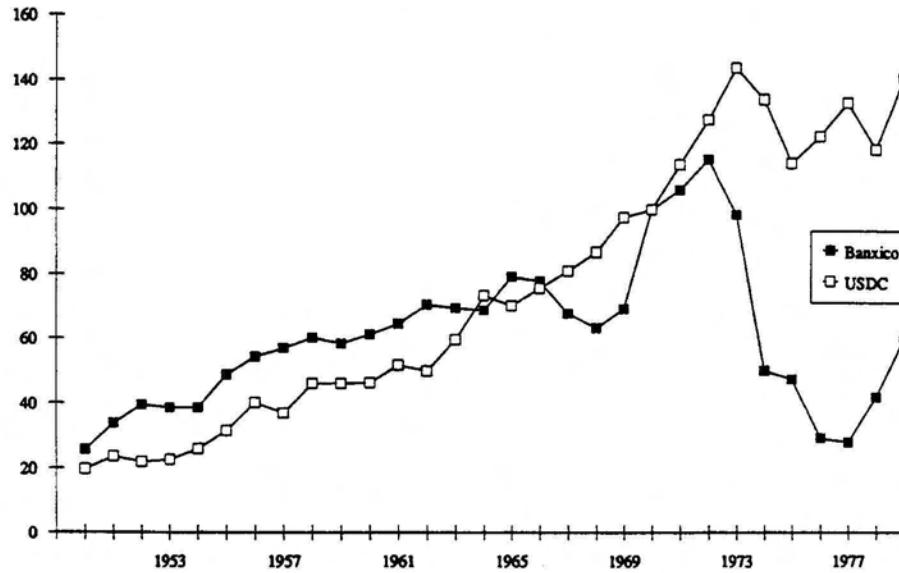


SOURCE: Tables E14 and E18.

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Figure E:13

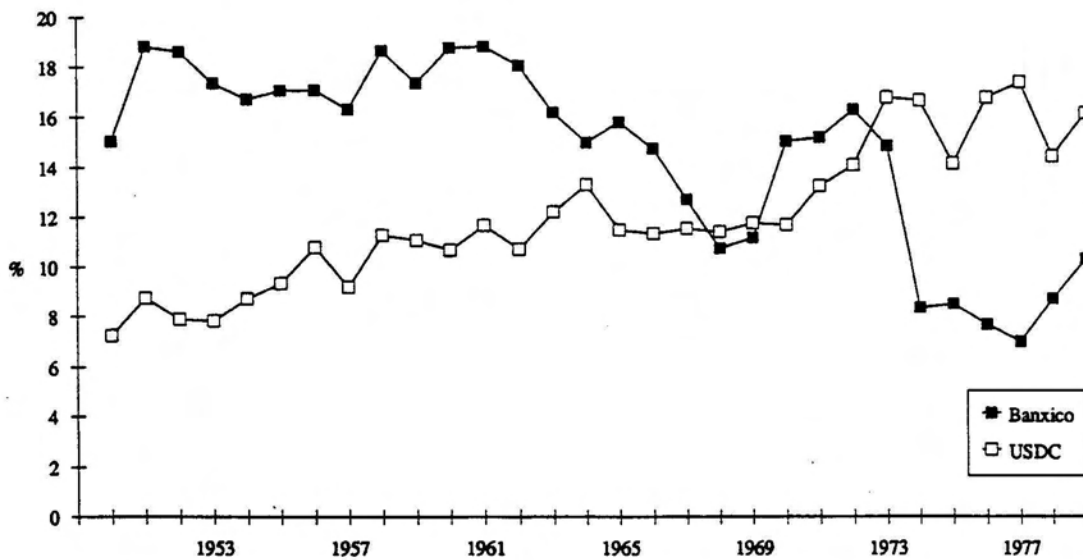
**TWO INDEXES OF U.S. TRADE INVESTMENT  
IN MEXICO, 1950-79**  
(1970 = 100)



SOURCE: Tables E2 and E3.

Figure E:14

**TWO PERSPECTIVES OF U.S. TRADE  
INVESTMENT IN MEXICO, AS PERCENTAGE OF  
TOTAL U.S. DIRECT INVESTMENT  
IN MEXICO, 1950-79**

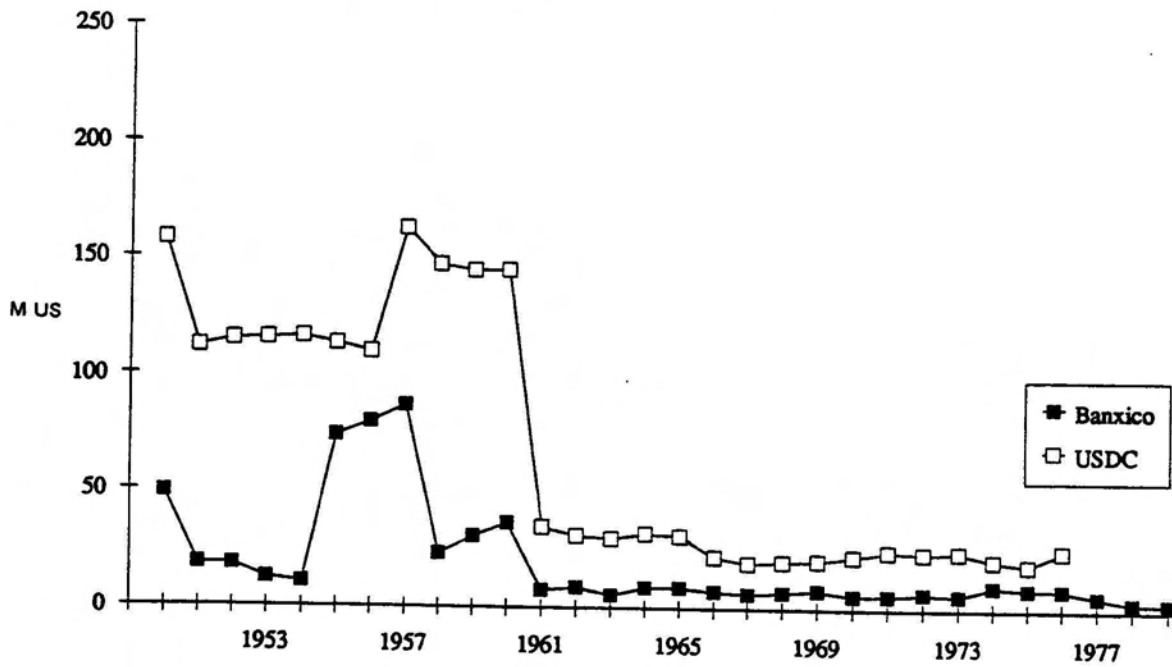


SOURCE: Tables E12 and E16.

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Figure E:15

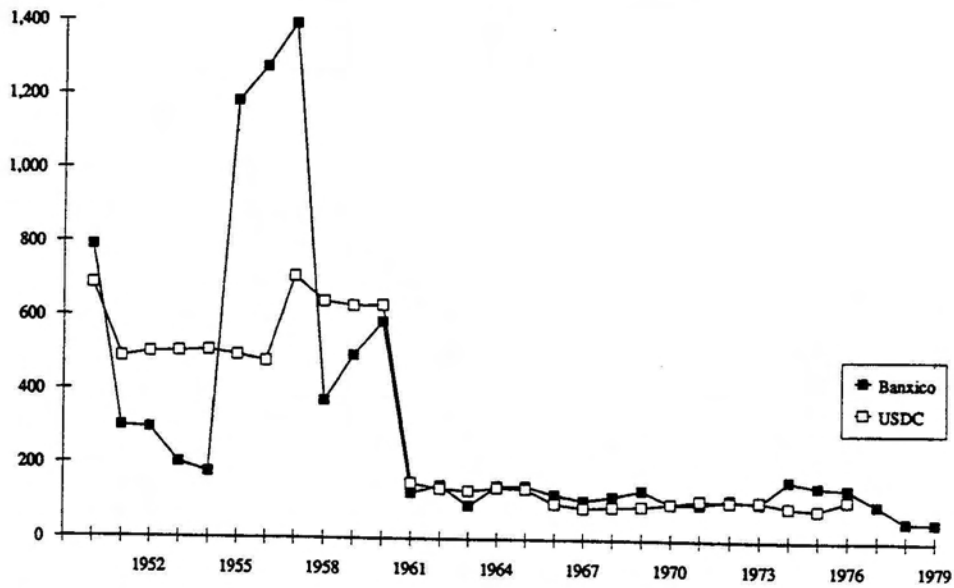
**TWO PERSPECTIVES OF REAL U.S. TRANSPORTATION INVESTMENT IN MEXICO, 1950-79**



SOURCE: Tables E14 and E18.

Figure E:16

**TWO INDEXES OF U.S. TRANSPORTATION INVESTMENT IN MEXICO, 1950-79  
(1970 = 100)**

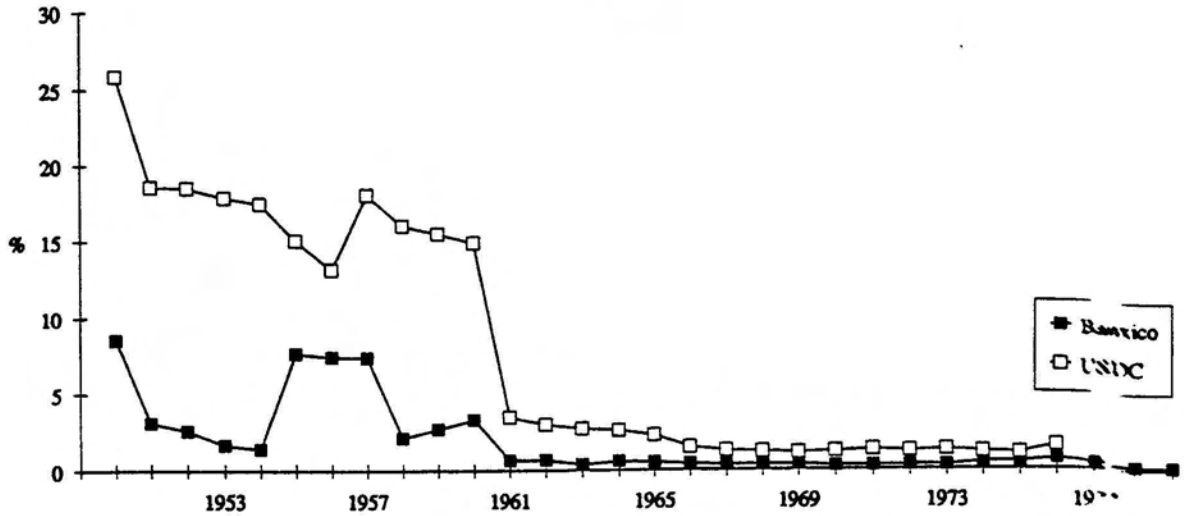


SOURCE: Tables E2 and E3.

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Figure E:17

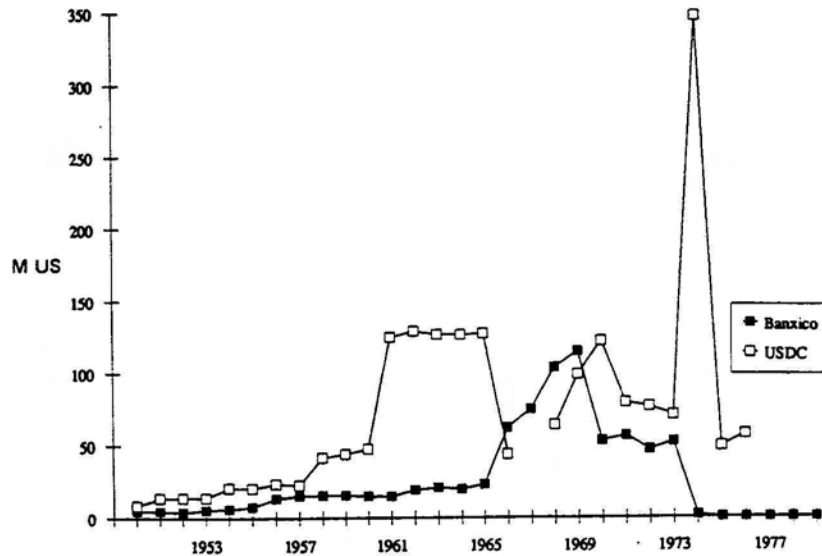
**TWO PERSPECTIVES OF U.S. TRANSPORTATION INVESTMENT IN MEXICO, AS PERCENTAGE OF TOTAL U.S. DIRECT INVESTMENT IN MEXICO, 1950-79**



SOURCE: Tables E12 and E16.

Figure E:18

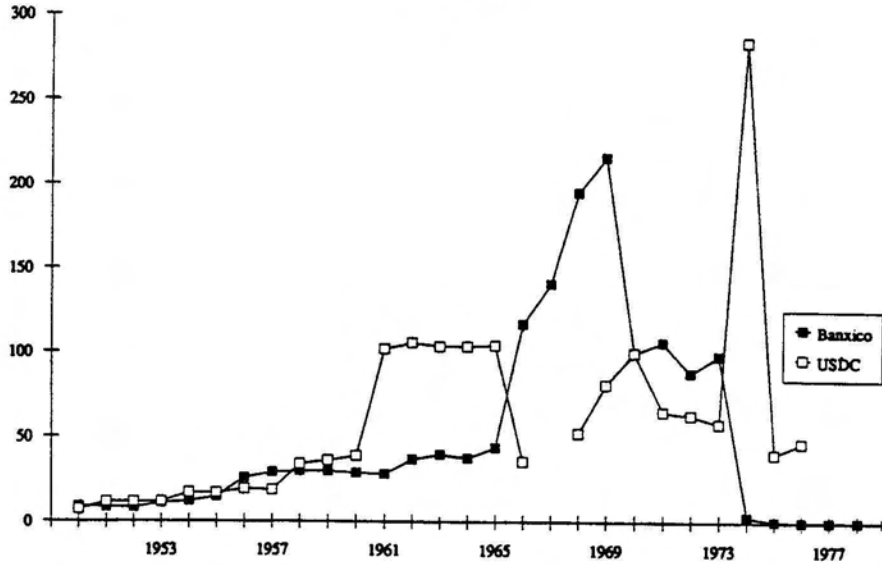
**TWO PERSPECTIVES OF REAL U.S. "OTHER INDUSTRIES" INVESTMENT IN MEXICO, 1950-79**



SOURCE: Tables E14 and E18.

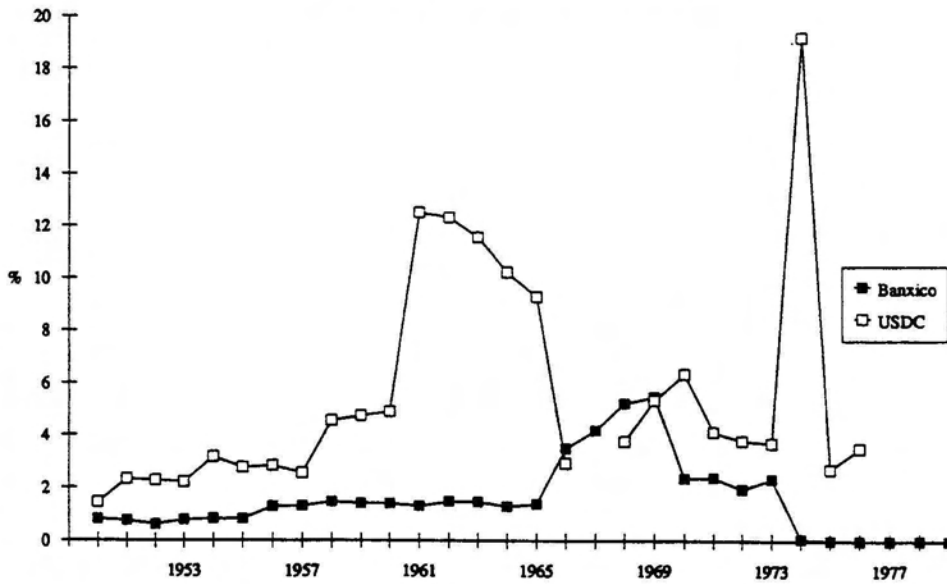
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Figure E:19  
**TWO INDEXES OF REAL U.S. "OTHER INDUSTRIES" INVESTMENT IN MEXICO, 1950-79**  
 (1970 = 100)



SOURCE: Tables E2 and E3.

Figure E:20  
**TWO PERSPECTIVES OF U.S. "OTHER INDUSTRIES" INVESTMENT IN MEXICO, AS PERCENTAGE OF TOTAL U.S. DIRECT INVESTMENT IN MEXICO, 1950-79**



SOURCE: Tables E12 and E16.



mation, but they are neither explicit nor specific. Consequently, one can only speculate on the many possible reasons for the divergences in estimates. Given the available information, any explanation of these differences depends on a limited number of factors, which will be outlined below.

### Definitions

The issue of the "correct" definition of direct foreign investment is difficult to resolve. Different countries employ different definitions,<sup>20</sup> in spite of the IMF guidelines, which seek to standardize the definition.<sup>21</sup> In the case of the United States and Mexico, the definition of direct foreign investment is basically the same; however, the methodology used to measure direct investment accounts for the differences, as can be appreciated in Table E6.

Direct foreign investment is commonly regarded as long-term investment aimed at controlling decisions and operations of a specific corporation outside the owner's country of residency.<sup>22</sup> Whether the amount of "control" equals 5, 10, or 25 percent ownership of a company's shares is unclear. Banxico has used the 5 percent limit, arguing that in most cases this small percentage is sufficient to control a company's decisions. Further, Banxico seems to implicitly assume that a company is foreign if foreign investments account for more than 25 percent of the company's shares.<sup>23</sup> Consequently, the 5 percent definition seems to encompass the value of foreign investments necessary to direct a company. Conversely, USDC used the 25 percent limit up to 1974, and then lowered it to 10 percent. Why these changes were made is not clearly explained, but the assumption is that a 10 percent participation of a company's shares could be regarded as sufficient ownership to control it.<sup>24</sup> In any event, the lower threshold indicates that USDC recognized the fact that with seemingly small participation in a company's assets, a company's management and strategy can be decided. If this is the case, Banxico's seemingly low definition is justified.

Given the conceptual difference explained above, one could expect a priori Banxico data to be higher than USDC data. One would assume that by using Banxico's 5 percent definition, in contrast to the 25 or 10 percent definition,

more companies would fall into the category of foreign investment. As seen in Table E1 and in the graphs of the previous section, Banxico's data are generally higher than those of USDC, with the exception of petroleum and transportation investments. However, to argue that all differences between Banxico and USDC data depend on the percentage of ownership definition is a mistake. In some cases USDI series from both sources move in opposite directions, or the differences amount to more than 20 percent (the difference between 25 and 5 percent definitions) between series. Other conceptual distinctions affect the measurements of both institutions, such as country of residence and loan treatment.

USDC considers a company's residence its fiscal residence. According to this definition, only companies subject to U.S. laws inside the U.S. territory are considered in the measurement of USDI. This contrasts with Banxico's criterion, which states that the owner's country of residence defines residency. Consequently, for Banxico, companies whose fiscal residence is located in a "fiscal paradise", but whose owners reside in the United States, are considered U.S. owned.<sup>25</sup> This difference may alter the sample of companies surveyed, but not substantially. It is likely that the effect of this difference is small, as most U.S. companies actually reside and pay taxes in the U.S. territory. Nevertheless, where this condition is present, it causes an upward adjustment in Banxico's data.

Residency definitions also vary in cases where a company's assets are divided between more than one foreign shareholder. Banxico's method of aggregation before 1974 consisted of defining residency according to the largest percentage of foreign ownership. Consequently, if a U.S. company owned the most shares out of all foreign companies investing in a Mexican affiliate, subsidiary, or associate, the company's ownership was considered of U.S. origin. This way of "measuring" residency approaches the objective of identifying *control* of a company, but it seems that it may cause higher valuation of U.S. asset holdings in a company than actually exists. USDC does not encounter this problem because its measurement is based, as explained above, on fiscal residence. Therefore, companies with parent companies that do not reside in the United States are not included in USDC's surveys, unless they reside in the United States.

The method for treating intercompany loans in USDI also affects investment values reported by both Banxico and USDC. These types of loans are considered foreign investment when they are dedicated to financing the operations of another company outside the United States. Banxico includes only those loans originating from the parent company in the United States and directed to the subsidiary or affiliate in Mexico. USDC incorporates, in addition to the parent company's loans, those loans provided by companies other than the parent. As a consequence, Banxico appears to underestimate the foreign financing of U.S. companies in Mexico.

<sup>20</sup>Vukmanic, Czinkota, and Ricks, "National and International Data Problems," identify variations in limits of ownership percentages that range from 10 percent to 35 percent. They studied information from the United States, Canada, United Kingdom, Japan, France, Germany, Sweden, and Australia.

<sup>21</sup>The IMF recommends considering an investment as foreign when it represents 10 percent of a company's assets. It also stipulates the treatment of loans and the concept of residency. This information can be found in the *Balance of Payments Manual* of the IMF.

<sup>22</sup>Paul Krugman, "Comment," in *Multinationals as Mutual Invaders*, emphasizes the vision of direct foreign investment as one dedicated to *control* a company, rather than a simple investment to increase an industry's productivity (p. 34).

<sup>23</sup>Sepúlveda and Chumacero, *La Inversión Extranjera*, p. 116.

<sup>24</sup>*Statistical Abstract of the United States*, various issues.

<sup>25</sup>Sepúlveda and Chumacero, *La Inversión Extranjera*, p. 116.

One would expect that a solution to the problem of loan treatments would be to add those loans of companies other than the parent to the total value of USDI reported by Banxico. This would apply given that Banxico provides data on an industry's liabilities with financial institutions and firms other than the parent. But the nature and direction of those loans are not clear because Banxico defines them as "the liabilities with nonresident persons or firms, resulting from net purchase of goods, and/or services, bank loans, etc.,"<sup>26</sup> and it does not divide them by country of origin.

#### Methods of Aggregation of the Data

One practice that reduces the statistical clarity of USDI values in Mexico is the aggregation procedure used by both Banxico and USDC in reporting data. Many of the problems encountered in working with these statistics stem from the attempt to disaggregate the data, particularly figures on Agriculture, Transportation, Public Utilities, Financial Services, and Communal Services investments. USDC has not published data on U.S. agricultural investments since 1950. Instead, it has added that information to the category "Other Industries." Consequently, no clear comparison can be established between Banxico and USDC agricultural data. Similar aggregation occurs in USDC's series on transportation, which includes public utilities investments. This also reduces the value of any comparison between Banxico's information on transportation investments with that of USDC, as the public utilities figures affect U.S. transportation data. Neither the *Benchmark Survey* nor the *Statistical Abstract of the United States*, published by USDC, provide this information.

This aggregation procedure causes additional problems with data comparison because, occasionally, USDC groups more than two types of investments into one category. For example, in 1970, under Other Industries, Agriculture, Trade, and other types of investments were added for the publication of the final figure.<sup>27</sup> The only apparent reason for this aggregation may be attributed to the small quantities of some of the series, such as Agriculture. This practice complicates comparisons between statistics published by both sources.

Banxico's published aggregates are also limited. In contrast with USDC data, Banxico's information on balance sheets is not organized by country, only by industry. As a result, possible adjustments required to make the series from both sources compatible cannot be performed because capital movements are not specified by country of origin. In addition, Banxico added investment values of financial services and communal services to the trade category up to 1973. This may explain another part of the differences between both sources. The sharp drop of Banxico data in

1974 can be explained because of the disaggregation of the other two series.

#### Other Options

Companies change hands, are liquidated, sold, or reorganized. These types of movements have an impact on a company's asset valuation and distribution of ownership, which must be reflected in the USDI data. However, these adjustments are not generally recorded either in Banxico or in USDC data, and therefore are not considered in this analysis.

Other types of data problems arise from underreporting data. Both Banxico and USDC utilize survey methods to collect information on the operations of U.S. companies in Mexico. In the case of Banxico, the main drawback of this method is that it relies on voluntary reports from the companies, in spite of laws requiring all companies to complete surveys. The apparent reason for maintaining a collection method based on voluntary reports is that the politics of foreign investment are delicate, and the government does not want to discourage investments by imposing too many restrictions. Under these circumstances, it is possible that some companies do not accurately report their operation data. In the case of USDC information, data collected from companies have to be compatible with their fiscal obligations. This may motivate some companies to report their investment values and earnings in a way that supports their other reports. If those other reports are not accurate, information on USDI values will not be accurate.

#### Correcting Differences: An Exercise

Having identified some of the elements that cause differences between the information of Banxico and USDC, we can attempt to modify two series in order to make them comparable: Other Industries and Transportation. These are the only cases for which the information published allows adjustments to be made.

#### Other Industries

As stated above, USDC includes in its series Other Industries information on agricultural investments. Since there is no clear way to separate these two series using USDC data alone, the best means for comparing them is to use Banxico data, combining Agriculture and Other Investments in the same category. This method has the disadvantage of aggregation, as explained before, but it appears to reduce the differences between data from both sources. Table E4 presents the calculations for this new series, and Figure E:21 graphs Real U.S. Agriculture and Other Industries data added for both sources. If we compare Figure E:21 with Figure E:18, it is evident that, once the adjustment is made, both series are closer. This is especially clear for 1954-61 and for 1970-73. Observing the ratios in Table E4, it can be seen that they have improved.

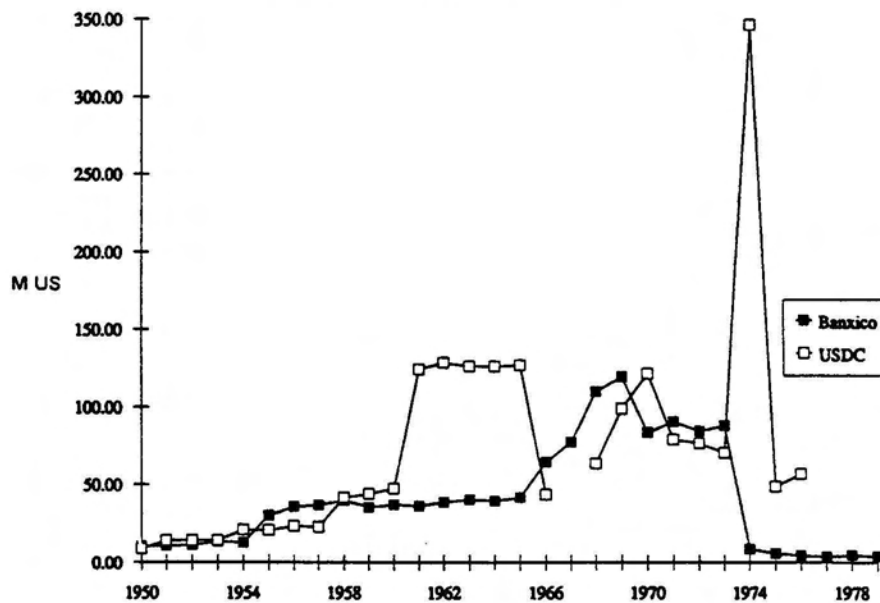
<sup>26</sup>*Serie de Estadísticas Históricas.*

<sup>27</sup>SALA, 27-3000.

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Figure E:21

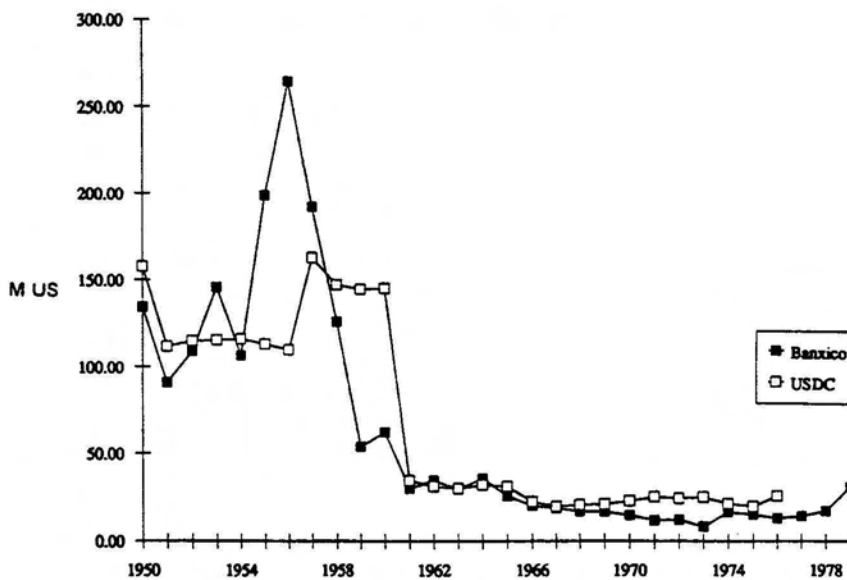
**TWO PERSPECTIVES OF REAL U.S. AGRICULTURAL AND "OTHER INDUSTRIES" INVESTMENT, 1950-79**



SOURCE: Table E4.

Figure E:22

**TWO PERSPECTIVES OF REAL U.S. TRANSPORTATION AND PUBLIC UTILITIES INVESTMENT, 1950-79**



SOURCE: Table E5.

### Transportation

USDC transportation figures include public utilities, while Banxico data do not. Performing a calculation similar to that made for Agriculture and Other Industries, we can add Electricity and Construction Investments to Transportation, using data from Banxico. Table E5 shows the revised data, and Figure E:22 graphs the new series, keeping USDC data unchanged. Except for the values for the years 1953-61, the rest of the values have come much closer. The adjustment is confirmed with the ratios shown in Table E5.

These two calculations seem to suggest that Banxico data and USDC data are quite compatible. Why, then, when the adjustments are made, are they not equal in every year? Possibly, some aggregation may exist in the sources. Also, perhaps some capital movements are not being published in these statistics.

### Conclusions

Banxico and USDC data provide a similar picture of the total value of U.S. business investments in Mexico,<sup>28</sup> particularly with respect to total USDI and Manufacturing investments. Results are less conclusive in relation to other industries. Statistics for Mining, Petroleum, Trade, Transportation and Other Industries demonstrate higher degrees of variability between sources.

I have suggested that USDI data differences between sources can be attributed to two factors: presentation of the data and differences in definition. Given that total USDI values published by both sources are quite similar, it is most likely that the "noise" separating Banxico and USDC data is more a consequence of the method used by each to *aggregate* industries than a result of a misunderstanding of what USDI values actually represent. Banxico and USDC have aggregated data in ways that limit the possibilities of conciliation between both perspectives when each industry is considered. As we have seen, the USDC practice of adding agricultural investments to Other Industries obscures the evolution of both series. Also, USDC's presentation of Transportation and Public Utilities data together impedes clear comparisons with Banxico's information, given that Banxico separates these data explicitly.

Perhaps the most interesting questions for further research relate to the implications of the movement of both series. We have seen that some series are clearly different in some periods. Given the explanations for value discrepancies between sources, one can attribute data differences to the presence of, for example, capital movements not registered by either Banxico or USDC. However, there are also cases in

which values between series are equivalent. How can we explain this coincidence in estimated values between sources? We know that intersections in the methods and values reported by Banxico and USDC exist, as seen in Table E6. Recognizing the areas where no intersection appears is the most difficult task. When no data discrepancies are present, two immediate explanations of these equivalencies arise: (1) that interindustry operations normally registered by only one of the sources were not present in the year under consideration, or (2) that pure luck determined such equivalencies. Future research should further analyze interindustry and intercompany capital flows.

The similarity between the series on total USDI values also reduces the importance of differences in Banxico and USDC methods of data collection. In particular, the distinction between 5, 10, or 25 percent ownership of a company's assets becomes less significant. This supports the view that most U.S.-controlled companies operating in Mexico have a percentage of U.S. asset ownership equal to or greater than 25. However, it must be stressed that such an argument is appropriate when referring to the series on Manufacturing and total USDI, and not to the rest of the series. As a consequence, special data comparisons may be required for the Mining, Petroleum, Trade, Transportation, and Other Industries classifications.

A note on the nature of publications from Banxico and USDC is appropriate. To improve the results of research on USDI, both sources require improved data presentation and more development of information. Banxico publishes a less than desirable amount of information on investment values on a country by country basis. It is easier to find series on total investment from all countries than from each foreign investor in Mexico when using Banxico data. USDC provides extensive (but not exhaustive) information on a country by country basis, but only when results from its *Benchmark Surveys* are published. In addition, delays in data availability unnecessarily complicate research on USDI. Development of more diverse data is also required. For example, USDI effects on industrial organization or technological transfers are difficult to trace with data from Banxico and USDC alone. One needs to turn to other sources to solve this problem,<sup>29</sup> but the possibilities of incurring other problems in calculations using incompatible data increase.

<sup>28</sup>This applies, at least, until 1973. The values from 1974 to 1979 begin to demonstrate pronounced differences.

<sup>29</sup>Mexican publications from the Instituto Mexicano del Seguro Social (IMSS), Instituto Nacional de Geografía e Informática (INEGI), or Secretaría de Comercio y Fomento Industrial (SECOFI) may be needed to extend USDI analysis to other areas, such as employment or industrial organization. U.S. publications that complement USDC data include *Moody's Investor's Manual*, *Who Owns Whom?* and *Fortune* magazine.

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APPENDIX

This study presents data on U.S. direct foreign investment (DFI) in Mexico. The statistics were gathered from January through March 1991. The figures are not final, much less definitive, and gaps remain to be filled. For example, Mexican data do not cover the period from 1980 to 1990, and U.S. data do not report information for the same categories on a consistent basis.

published in IMF-IFS. Deflated figures were computed using the U.S. Export Price Index (SALA, 28-3331). Proportions and percentage changes were calculated for every year and activity in order to provide an idea of the influence of U.S. investment in each. It is perhaps no surprise that in practically every activity the United States holds the greatest amount of funds invested.

Tables E7-E14 present the Banco de México data. Data in pesos were converted into dollars with the series

Tables E15-E18 show USDC data for the same categories as the Mexican source. They are ordered in the same way as Banco de México's figures.

Table E1  
RATIO OF BANXICO TO USDC VALUES OF U.S. DIRECT INVESTMENT  
IN MEXICO, 1950-79<sup>1</sup>

Year	U.S. Total	Agriculture	Mining	Petroleum	Manufacturing	Trade	Transportation	Other Industries
1950	.94	1.36	.71	.92	1.02	1.95	.31	.53
1951	1.00	~	1.04	.94	.84	2.15	.17	.33
1952	1.15	~	1.11	.65	1.01	2.70	.16	.30
1953	1.16	~	1.05	.96	1.12	2.57	.11	.41
1954	1.17	~	1.03	1.15	1.17	2.24	.09	.30
1955	1.28	~	1.07	.87	1.12	2.33	.65	.38
1956	1.28	~	1.08	.65	1.09	2.03	.72	.58
1957	1.31	1.77	1.12	.31	1.18	2.32	.53	.67
1958	1.19	~	1.11	.40	1.27	1.97	.16	.38
1959	1.22	~	1.32	.23	1.23	1.91	.21	.36
1960	1.13	~	1.09	.67	1.25	1.99	.25	.33
1961	1.16	~	1.00	.38	1.37	1.87	.22	.12
1962	1.26	~	1.08	.81	1.46	2.13	.29	.15
1963	1.32	~	1.17	.93	1.50	1.75	.19	.17
1964	1.25	~	1.09	1.08	1.39	1.41	.28	.16
1965	1.23	~	1.17	.93	1.32	1.70	.29	.18
1966	1.19	~	1.46	1.40	1.18	1.55	.34	1.42
1967	1.14	~	~	1.47	1.15	1.26	.33	~
1968	1.16	~	1.27	1.53	1.18	1.10	.36	1.62
1969	1.13	~	1.11	.59	1.17	1.07	.40	1.16
1970	1.17	~	1.12	.95	1.20	1.50	.27	.44
1971	1.22	~	1.15	1.05	1.22	1.40	.24	.71
1972	1.17	~	1.34	.81	1.15	1.36	.29	.61
1973	1.16	~	1.71	.79	1.16	1.03	.26	.74
1974	1.12	~	1.99	~	1.10	.56	.47	.01
1975	1.04	~	2.07	~	1.04	.62	.47	.01
1976	.78	~	1.27	~	.80	.36	.35	0
1977	.79	~	1.29	~	.82	.32	~	~
1978	.88	~	1.48	~	.90	.53	~	~
1979	1.01	~	2.23	~	.94	.64	.01	~

1. Ratio over 1.00 indicates Banxico data are higher than USDC data.

SOURCE: Calculated from tables E14 and E18.

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Table E2

**BANXICO REAL INDEX OF U.S. DIRECT INVESTMENT VALUES**  
(1970 = 100)

Year	U.S. Total	Agriculture	Mining	Petroleum	Manufacturing	Electricity	Construction	Trade	Transportation	Other Activities
1950	25.70	19.49	89.17	185.46	12.10	2,724.21	118.38	25.65	789.38	8.77
1951	27.01	20.16	118.63	115.07	12.72	2,367.14	69.04	33.74	300.20	8.71
1952	31.89	22.59	129.80	88.61	16.25	2,663.73	241.49	39.40	295.98	8.14
1953	33.49	25.38	132.47	144.68	18.20	4,126.73	247.05	38.61	202.14	11.06
1954	34.74	21.01	130.21	208.78	19.49	2,843.00	239.86	38.59	176.69	12.06
1955	42.99	72.78	140.96	179.44	23.10	3,830.31	259.11	48.79	1,183.70	14.84
1956	47.83	71.08	150.94	188.90	25.54	5,978.78	227.41	54.28	1,275.64	26.06
1957	52.60	69.52	134.16	123.40	29.17	3,315.76	175.75	57.00	1,394.44	29.18
1958	48.59	77.37	133.80	165.16	30.86	3,220.00	179.80	60.24	373.15	29.91
1959	50.63	63.47	156.72	89.81	32.46	439.48	187.80	58.40	494.44	29.96
1960	49.10	70.70	121.62	278.07	36.13	531.47	187.08	61.31	587.11	29.09
1961	51.61	69.18	108.89	260.16	41.58	337.41	221.72	64.63	124.30	28.37
1962	58.86	62.23	110.96	755.22	47.21	429.51	230.12	70.71	145.64	37.00
1963	64.61	62.52	115.34	766.22	54.90	466.16	185.91	69.62	90.72	39.91
1964	69.16	63.03	117.62	761.76	60.71	484.36	224.87	68.87	143.52	37.80
1965	75.38	59.21	99.66	546.53	69.81	228.04	179.34	79.27	144.00	43.95
1966	79.56	8.46	109.79	482.75	74.37	92.35	173.85	78.00	122.14	116.97
1967	80.18	9.12	96.32	446.23	78.17	98.48	164.33	67.85	105.93	141.09
1968	88.54	20.94	94.56	438.54	88.77	103.62	118.85	63.31	118.16	195.06
1969	93.48	16.06	96.55	98.77	95.43	108.94	92.35	69.41	134.63	215.97
1970	100.00	99.99	100.00	99.99	100.00	100.07	99.92	100.00	100.05	100.01
1971	104.94	111.26	81.37	75.18	106.98	97.30	53.10	105.97	98.85	106.37
1972	106.44	122.26	86.84	80.51	106.94	98.59	43.13	115.42	113.12	88.37
1973	99.66	117.39	82.52	67.18	101.53	~	33.71	98.41	102.90	98.49
1974	90.15	23.45	73.42	~	91.30	~	114.10	50.07	163.40	3.28
1975	83.92	18.42	66.17	~	86.73	~	104.59	47.48	147.81	.60
1976	57.06	14.66	42.94	~	59.16	~	75.35	29.16	143.13	.26
1977	60.25	12.21	47.07	~	62.75	~	139.72	28.01	100.08	.25
1978	72.30	15.49	49.97	~	73.81	~	245.08	41.93	53.72	.26
1979	87.61	12.97	51.98	~	85.68	~	485.30	60.07	52.57	.32

SOURCE: Calculated from table E14.

Table E3

USDC REAL INDEX OF U.S. DIRECT INVESTMENT VALUES, 1950-79  
(1970 = 100)

Year	Total	Mining	Petroleum	Manufacturing	Transportation	Trade	Other Industries
1950	31.94	140.52	191.74	14.21	686.16	19.75	7.25
1951	31.50	127.69	115.83	18.09	486.82	23.56	11.60
1952	32.54	130.38	129.37	19.22	500.59	21.95	11.66
1953	33.76	141.12	142.86	19.48	502.54	22.61	11.71
1954	34.75	140.42	171.73	19.91	505.43	25.95	17.32
1955	39.35	146.80	195.57	24.75	493.17	31.43	17.10
1956	43.61	155.51	275.00	27.99	478.26	40.18	19.47
1957	47.02	133.15	377.13	29.53	708.77	36.93	18.95
1958	47.87	134.46	393.12	29.02	640.96	46.07	34.24
1959	48.70	132.52	368.55	31.42	630.27	46.07	36.25
1960	50.77	124.98	390.72	34.60	631.74	46.33	39.03
1961	51.99	121.65	646.71	36.28	151.00	51.86	102.09
1962	54.63	114.79	879.52	38.59	136.20	50.02	105.67
1963	57.15	110.05	783.13	43.83	130.96	59.70	103.69
1964	64.53	120.27	668.26	52.40	140.09	73.52	103.68
1965	71.55	94.78	555.56	63.41	135.87	70.27	104.36
1966	78.10	84.05	325.84	75.48	97.70	75.74	35.92
1967	82.14	~	286.34	81.08	86.19	81.12	~
1968	88.93	82.93	271.44	90.25	89.69	86.77	52.51
1969	96.88	97.18	158.23	97.61	91.73	97.48	81.28
1970	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1971	100.44	78.66	67.90	104.87	109.64	113.88	65.19
1972	106.12	72.46	93.90	110.98	106.14	127.85	63.11
1973	100.26	53.93	80.58	105.10	108.61	143.89	58.12
1974	94.23	41.26	113.64	99.41	93.32	134.15	284.61
1975	94.56	35.59	124.29	100.02	85.97	114.26	40.29
1976	85.28	37.86	92.90	88.03	111.67	122.46	47.03
1977	89.38	40.83	137.57	91.67	~	132.98	~
1978	95.83	37.70	202.37	98.43	~	118.33	~
1979	101.84	25.95	628.79	108.44	957.80	140.74	~

SOURCE: Calculated from table E18.

Table E4

CORRECTING DIFFERENCES: "OTHER INDUSTRIES" INVESTMENT,  
1950-79

Year	Banxico Data			USDC Data	
	Agriculture (A)	"Other Industries" (B)	(C=A+B)	"Other Industries" (D)	New Ratio (C/D)
1950	6.02	4.67	10.69	8.85	1.21
1951	6.23	4.63	10.86	14.16	.77
1952	6.98	4.33	11.31	14.23	.79
1953	7.84	5.89	13.73	14.29	.96
1954	6.49	6.42	12.91	21.14	.61
1955	22.49	7.90	30.39	20.86	1.46
1956	21.96	13.88	35.84	23.75	1.51
1957	21.48	15.54	37.02	23.11	1.60
1958	23.91	15.92	39.83	41.77	.95
1959	19.61	15.95	35.56	44.23	.80
1960	21.85	15.49	37.33	47.62	.78
1961	21.38	15.10	36.48	124.55	.29
1962	19.23	19.70	38.93	128.92	.30
1963	19.32	21.25	40.57	126.51	.32
1964	19.48	20.12	39.60	126.49	.31
1965	18.30	23.40	41.69	127.31	.33
1966	2.61	62.27	64.89	43.82	1.48
1967	2.82	75.12	77.93	~	~
1968	6.47	103.85	110.32	64.06	1.72
1969	4.96	114.98	119.94	99.16	1.21
1970	30.90	53.24	84.14	122.00	.69
1971	34.38	56.63	91.01	79.53	1.14
1972	37.78	47.05	84.83	77.00	1.10
1973	36.27	52.44	88.71	70.91	1.25
1974	7.25	1.74	8.99	347.22	.03
1975	5.69	0.32	6.01	49.15	.12
1976	4.53	0.14	4.67	57.38	.08
1977	3.77	0.13	3.90	~	~
1978	4.79	0.14	4.92	~	~
1979	4.01	0.17	4.18	~	~

SOURCE: Calculated from tables E14 and E18.



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Table E5

**CORRECTING DIFFERENCES: TRANSPORTATION  
AND PUBLIC UTILITIES INVESTMENT, 1950-79**

Year	Banxico Data	USDC Data		
	Transportation, Electricity, and Construction (A)	Transportation and Public Utilities (B)	New Ratio (C=A/B)	Original Ratio (D)
1950	134.40	157.82	.85	.31
1951	90.82	111.97	.81	.17
1952	108.94	115.14	.95	.16
1953	145.55	115.58	1.26	.11
1954	106.58	116.25	.92	.09
1955	198.85	113.43	1.75	.65
1956	264.65	110.00	2.41	.72
1957	192.40	163.02	1.18	.53
1958	126.25	147.42	.86	.16
1959	54.18	144.96	.37	.21
1960	62.57	145.30	.43	.25
1961	30.12	34.73	.87	.22
1962	34.58	31.33	1.10	.29
1963	29.69	30.12	.99	.19
1964	35.73	32.22	1.11	.28
1965	25.78	31.25	.82	.29
1966	20.20	22.47	.90	.34
1967	18.82	19.82	.95	.33
1968	17.13	20.63	.83	.36
1969	16.80	21.10	.80	.40
1970	14.82	23.00	.64	.27
1971	11.99	25.22	.48	.24
1972	12.35	24.41	.51	.29
1973	8.34	24.98	.33	.26
1974	16.69	21.46	.78	.47
1975	15.18	19.77	.77	.47
1976	13.22	25.68	.51	.35
1977	14.21	~	~	~
1978	17.34	~	~	~
1979	30.99	220.29	0.14	~

SOURCE: Calculated from tables E14 and E18.

Table E6  
**BANXICO AND USDC METHODS OF DATA COLLECTION**

Determinant	Banxico	USDC
Source of Information	Survey	Survey
Population Surveyed	Before 1973, total population approximated from periodical publications. After 1973, obtained from the Registro Nacional de Inversiones Extranjeras.	Foreign companies with total assets, or income, greater than \$500,000, for 1977.
Percentage of Ownership by Nonresidents	5 percent	25 percent (1950-77) 10 percent (1977-79)
Residence	Determined according to the center of operations of the person who controls the company. The person must reside in that center for at least five years.	A person is resident of the United States if subject to U.S. jurisdiction for at least one year.
Person	Investor	Any individual, branch, partnership, associated group, estate, trust, corporation, or other organization.
Industry	U.N.'s 2-digit STIC for major industries	Adapted from, but not identical to, classification ESIC (Enterprise Industry Classification) for major industries, and BEA's 3-digit for subindustries.
Foreign Financing	Considers loans made only by parent companies to U.S. companies operating in Mexico.	Considers loans made by parent and non-parent U.S. companies to U.S. companies operating in Mexico.

SOURCE: Constructed from information in *Serie de Estadísticas Históricas* (Banxico) and various issues of *U.S. Investments Abroad* (USDC).

Table E7  
BANXICO PERSPECTIVE OF NOMINAL U.S. DIRECT INVESTMENT IN MEXICO, 1938-79  
(T Pesos)

Year	Total DFI in Mexico (All Countries)	U.S. Investments											Other Industries	
		U.S. Total	Agri-culture	Mining	Petroleum	Manu-facturing	Electricity	Con-struction	Trade	Trans-portion	Financial Services	Communal Services		
1938	2,025,072	1,223,545	15,225	455,779	4,629	102,697	289,203	~	62,551	287,483	~	~	~	5,968
1939	2,166,728	1,328,513	14,278	490,617	4,639	117,083	307,438	~	61,716	327,230	~	~	~	5,513
1940	2,178,197	1,336,788	15,647	478,248	5,684	137,250	290,388	~	66,429	337,703	~	~	~	5,439
1941	2,196,381	1,346,948	18,414	487,169	5,687	165,528	293,047	~	81,873	288,591	~	~	~	6,639
1942	2,315,272	1,479,825	20,794	499,639	4,705	200,036	291,828	2,000	105,130	348,823	~	~	~	6,872
1943	2,382,251	1,552,433	25,762	516,029	4,673	243,516	290,227	3,288	102,367	350,447	~	~	~	16,124
1944	2,579,343	1,718,470	33,308	564,502	4,295	301,085	301,597	5,401	111,006	368,391	~	~	~	28,685
1945	2,768,248	1,895,981	32,526	574,913	4,292	440,313	303,159	19,533	130,400	358,722	~	~	~	32,123
1946	2,780,823	2,059,082	38,808	540,045	4,348	605,596	301,248	20,751	166,018	345,732	~	~	~	36,536
1947	3,000,309	2,268,986	41,947	526,326	4,805	708,865	316,329	21,626	229,949	378,092	~	~	~	41,048
1948	3,494,380	2,460,026	~	~	16,015	~	~	35,795	~	~	~	~	~	~
1949	4,153,593	3,016,172	~	~	42,837	~	~	47,964	~	~	~	~	~	~
1950	4,895,917	3,371,493	35,318	740,842	102,892	1,171,060	460,128	39,643	508,700	288,417	~	~	~	27,395
1951	5,840,731	4,061,184	41,866	1,129,603	73,162	1,411,161	488,199	26,495	763,847	125,702	~	~	~	31,149
1952	6,302,139	4,769,792	46,667	1,229,632	66,052	1,792,643	512,954	92,200	887,455	123,297	~	~	~	28,969
1953	6,829,063	4,989,510	52,229	1,250,063	91,162	1,998,716	791,600	93,956	866,323	83,879	~	~	~	39,228
1954	10,428,166	7,353,488	61,425	1,745,600	186,988	3,043,462	774,775	129,600	1,230,012	104,163	~	~	~	60,738
1955	11,910,113	9,221,688	216,600	1,914,713	162,750	3,663,663	1,087,625	141,850	1,576,688	707,025	~	~	~	75,725
1956	13,642,463	10,701,113	219,638	2,138,575	178,700	4,214,613	1,271,888	129,850	1,828,625	784,725	~	~	~	138,763
1957	14,563,525	12,089,938	220,713	1,953,075	119,950	4,945,863	981,200	103,113	1,972,888	892,625	~	~	~	159,625
1958	14,618,966	11,060,825	243,250	1,928,850	168,975	5,180,700	843,588	104,463	2,064,838	236,538	~	~	~	162,013
1959	15,569,143	11,524,525	199,550	2,259,338	86,450	5,449,213	128,784	109,112	2,001,575	313,425	~	~	~	162,275
1960	13,516,424	11,246,875	223,650	1,764,041	269,302	6,103,388	166,700	109,362	2,114,348	374,456	~	~	~	158,543
1961	14,129,687	12,051,625	223,125	1,610,250	258,875	7,161,713	101,425	132,138	2,272,275	80,825	~	~	~	157,625
1962	16,073,890	13,660,775	199,513	1,631,025	741,225	8,081,363	128,338	136,325	2,471,413	94,138	~	~	~	204,350
1963	17,716,233	14,996,488	200,438	1,695,425	752,025	9,397,975	139,288	110,138	2,433,075	58,638	~	~	~	220,488
1964	19,405,516	16,205,650	204,025	1,746,550	764,850	10,492,663	146,122	134,500	2,430,225	93,663	~	~	~	210,788
1965	21,809,058	18,211,671	197,602	1,525,002	558,381	12,440,446	70,929	110,597	2,883,950	96,890	~	~	~	252,681
1966	23,883,503	19,801,401	29,088	1,730,429	508,053	13,651,862	29,590	110,434	2,923,146	84,657	~	~	~	692,803
1967	25,447,868	20,367,574	31,968	1,548,888	479,118	14,638,825	32,191	106,488	2,594,215	74,904	~	~	~	852,568
1968	28,122,144	22,802,904	74,475	1,542,416	477,604	16,882,692	34,356	78,130	2,455,058	84,748	~	~	~	1,195,590
1969	31,300,302	24,780,034	58,791	1,621,034	110,725	18,660,216	37,178	62,488	2,770,519	99,390	~	~	~	1,362,515
1970	35,198,705	27,963,867	386,204	1,771,031	118,241	20,625,678	36,025	71,315	4,210,764	77,914	~	~	~	665,544
1971	37,368,575	30,255,194	443,075	1,485,674	91,662	22,749,955	36,113	39,075	4,600,528	79,363	~	~	~	729,836
1972	39,596,877	31,698,792	502,938	1,637,847	101,368	23,491,762	37,800	32,787	5,175,836	93,821	~	~	~	626,302
1973	45,180,741	34,596,308	562,675	1,813,636	98,588	25,988,384	47,373	29,863	5,142,473	99,443	~	~	~	813,447
1974	51,535,395	39,933,333	143,502	2,059,765	~	29,637,216	~	129,006	3,339,536	201,571	~	~	~	34,528
1975	57,261,224	41,539,218	125,935	2,074,364	~	31,663,915	~	132,129	3,538,801	203,746	~	~	~	7,046
1976	65,524,343	46,601,950	165,415	2,221,268	~	35,641,196	~	157,069	3,586,060	325,540	~	~	~	5,121
1977	84,289,101	58,076,535	162,546	2,873,136	~	44,608,939	~	343,731	4,055,291	268,643	~	~	~	5,696
1978	107,696,337	74,461,206	220,325	3,259,151	~	56,068,868	~	644,258	6,502,846	154,088	~	~	~	6,305
1979	151,518,161	103,066,004	210,680	3,872,672	~	74,338,198	~	1,457,114	10,640,235	172,224	~	~	~	8,969

SOURCE: Banco de México, *Estadísticas Históricas: Inversión Extranjera Directa* (México: Banco de México, 1982).

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Table E8  
**BANXICO PERSPECTIVE OF NOMINAL U.S. DIRECT INVESTMENT IN MEXICO, 1948-79**  
 (M US)

Year	Exchange Rate	Total DFI		U.S. Investments													
		Mexico	in Mexico	U.S. Total	Agri- culture	Mining	Petroleum	Manu- facturing	Electricity	Con- struction	Trade	Trans- portation	Financial Services	Communal Services	Other Industries		
1948	4.855	719.75	506.70	~	~	3.30	~	~	~	7.37	~	~	~	~	~	~	~
1949	8.65	480.18	348.57	~	~	4.95	~	~	~	5.54	~	~	~	~	~	~	~
1950	8.65	566.00	389.77	4.08	85.66	11.90	135.38	53.19	4.58	4.58	58.58	33.34	~	~	~	~	~
1951	8.65	675.23	469.50	4.84	130.59	8.46	163.14	52.97	3.06	3.06	88.31	14.53	~	~	~	3.17	~
1952	8.65	728.57	551.42	5.40	142.15	6.48	207.24	59.30	10.66	10.66	102.60	14.25	~	~	~	3.60	~
1953	8.65	789.49	576.82	6.04	144.52	10.54	231.18	91.51	10.86	10.86	100.15	9.70	~	~	~	3.35	~
1954	12.5	834.33	588.28	4.91	139.65	14.95	243.48	61.98	10.37	10.37	98.40	8.33	~	~	~	4.54	~
1955	12.5	952.81	737.74	17.25	153.18	13.02	292.29	84.61	11.35	11.35	126.05	56.56	~	~	~	4.86	~
1956	12.5	1,091.40	856.09	17.57	171.09	14.30	337.17	137.75	10.39	10.39	146.29	63.58	~	~	~	6.06	~
1957	12.5	1,165.08	967.19	17.66	156.25	9.60	395.67	78.50	8.25	8.25	157.84	71.41	~	~	~	11.10	~
1958	12.5	1,169.52	884.87	19.46	154.31	12.72	414.46	75.49	8.36	8.36	165.19	18.92	~	~	~	12.77	~
1959	12.5	1,244.73	921.96	15.96	180.75	6.92	435.94	10.30	8.73	8.73	160.13	25.07	~	~	~	12.96	~
1960	12.5	1,081.31	899.67	17.89	141.12	21.54	488.27	12.54	8.75	8.75	169.15	29.96	~	~	~	12.98	~
1961	12.5	1,130.37	964.12	17.85	128.82	20.55	672.94	8.11	10.57	10.57	181.78	6.47	~	~	~	12.68	~
1962	12.5	1,285.91	1,092.86	15.96	130.48	59.30	646.51	10.27	10.91	10.91	197.71	7.53	~	~	~	12.61	~
1963	12.5	1,417.30	1,199.72	16.04	135.63	60.16	751.84	11.14	8.81	8.81	194.65	4.69	~	~	~	16.35	~
1964	12.5	1,552.44	1,296.45	16.32	139.65	60.39	839.41	11.69	10.76	10.76	194.42	7.49	~	~	~	17.64	~
1965	12.5	1,744.72	1,456.93	15.81	122.00	44.67	995.24	5.67	8.85	8.85	230.72	7.75	~	~	~	16.86	~
1966	12.5	1,894.68	1,584.11	2.33	138.43	40.64	1,092.15	2.37	8.83	8.83	233.85	6.77	~	~	~	20.21	~
1967	12.5	2,035.83	1,628.61	2.56	123.91	38.33	1,171.11	2.58	8.52	8.52	207.54	5.99	~	~	~	55.42	~
1968	12.5	2,249.77	1,824.23	5.96	123.39	38.21	1,349.02	2.75	6.25	6.25	196.40	6.78	~	~	~	68.21	~
1969	12.5	2,504.02	1,982.40	4.70	129.68	8.86	1,492.82	2.97	5.00	5.00	221.64	7.95	~	~	~	95.65	~
1970	12.5	2,815.90	2,237.11	30.90	141.68	9.46	1,650.05	2.88	5.71	5.71	336.86	6.23	~	~	~	109.00	~
1971	12.5	2,989.49	2,420.42	35.45	118.85	7.33	1,820.00	2.89	3.13	3.13	368.04	6.35	~	~	~	53.24	~
1972	12.5	3,167.73	2,535.90	40.24	131.03	8.11	1,879.34	3.02	2.62	2.62	414.07	7.51	~	~	~	58.39	~
1973	12.5	3,614.46	2,766.90	45.01	145.09	7.89	2,079.07	~	2.39	2.39	411.40	7.96	~	~	~	60.10	~
1974	12.5	4,122.83	3,194.67	11.48	164.78	~	2,386.50	~	10.32	10.32	267.16	16.13	~	~	~	65.08	~
1975	12.5	4,580.90	3,323.14	10.07	165.95	~	2,533.11	~	10.57	10.57	283.10	16.30	331.03	4.51	~	2.76	~
1976	19.95	3,284.43	2,335.94	8.29	111.34	~	1,786.53	~	7.87	7.87	179.75	16.32	298.93	4.54	~	.56	~
1977	22.736	3,707.30	2,554.39	7.15	126.37	~	1,962.04	~	15.12	15.12	178.80	11.82	221.98	3.60	~	.26	~
1978	22.724	4,739.32	3,276.76	9.70	143.42	~	2,467.43	~	28.35	28.35	286.17	6.78	248.42	.46	~	.25	~
1979	22.803	6,644.70	4,519.84	9.24	169.83	~	3,260.02	~	63.90	63.90	466.62	7.55	329.91	4.73	~	.28	~
													536.57	5.67	~	.39	~

SOURCE: Calculated from table E7.

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Table E9  
 U.S. DIRECT INVESTMENT AS PERCENTAGE OF TOTAL DIRECT FOREIGN INVESTMENT  
 FROM ALL COUNTRIES, BY ACTIVITY, 1938-79

Year	Total	Agricul- culture	Mining	Petroleum	Manu- facturing	Electricity	Con- struction	Trade	Trans- portation	Financial Services	Communal Services	Other Industries
1938	60.42	37.18	87.84	100.00	86.45	44.88	~	89.01	46.28	~	~	100.00
1939	61.31	36.01	92.13	100.00	86.37	46.12	~	87.52	45.97	~	~	100.00
1940	61.37	38.83	91.70	100.00	88.42	42.39	~	87.15	49.03	~	~	100.00
1941	61.33	43.03	87.82	100.00	88.52	44.36	~	90.18	44.53	~	~	100.00
1942	63.92	46.18	87.22	100.00	89.05	43.09	100.00	90.41	52.41	~	~	100.00
1943	65.17	48.14	86.90	100.00	87.39	44.45	100.00	90.17	52.64	~	~	100.00
1944	66.62	56.63	87.15	100.00	88.58	45.04	100.00	90.98	52.43	~	~	100.00
1945	68.74	55.84	87.89	100.00	90.96	45.90	100.00	93.57	50.83	~	~	99.23
1946	73.78	60.26	86.19	100.00	88.87	45.50	100.00	91.89	67.29	~	~	99.32
1947	75.63	69.32	87.05	100.00	86.76	46.26	100.00	79.63	78.12	~	~	99.39
1948	70.40	~	~	100.00	~	~	100.00	~	~	~	~	~
1949	72.59	~	~	100.00	~	~	100.00	~	~	~	~	~
1950	68.86	99.49	76.59	100.00	91.54	38.88	95.54	83.52	44.25	~	~	99.91
1951	69.63	82.29	82.28	100.00	90.15	34.91	96.14	86.48	23.99	~	~	100.00
1952	75.69	95.49	88.72	100.00	91.92	36.98	98.86	88.37	36.51	~	~	99.91
1953	73.06	93.66	87.83	76.61	89.57	52.78	98.77	85.59	24.39	~	~	82.57
1954	70.51	80.45	85.69	84.80	87.47	32.76	98.79	84.71	17.38	~	~	88.39
1955	77.43	97.40	87.78	81.82	84.12	44.21	98.29	85.84	99.22	~	~	94.48
1956	78.44	97.24	87.84	83.12	87.33	62.38	99.03	86.92	99.47	~	~	94.43
1957	83.01	97.66	87.08	78.95	84.53	36.49	98.85	88.40	99.51	~	~	94.56
1958	75.66	90.33	87.51	95.31	83.39	33.37	97.05	87.72	97.95	~	~	68.84
1959	74.07	91.22	85.74	100.00	81.75	4.28	98.90	87.59	97.93	~	~	70.48
1960	83.20	92.09	83.68	100.00	81.07	84.39	98.74	86.22	97.44	~	~	68.27
1961	85.29	92.08	80.89	100.00	83.50	64.05	98.81	87.05	92.04	~	~	53.97
1962	84.99	91.22	90.47	100.00	82.98	125.27	96.86	85.90	92.21	~	~	58.38
1963	84.65	86.65	89.56	100.00	84.04	108.53	81.34	82.54	81.88	~	~	58.99
1964	83.51	86.86	89.07	100.00	82.77	104.91	83.46	80.62	88.69	~	~	58.75
1965	83.51	85.49	92.34	100.02	82.85	48.54	90.33	816.12	83.81	~	~	61.89
1966	83.61	100.00	94.61	100.00	82.35	41.72	90.77	84.33	85.96	~	~	70.51
1967	80.00	100.00	93.48	100.00	78.76	108.79	82.99	78.74	84.34	~	~	74.00
1968	81.09	100.00	93.18	100.00	80.47	106.73	67.32	79.15	78.29	~	~	74.72
1969	79.17	100.00	92.07	100.00	79.04	108.21	64.12	76.35	83.95	~	~	72.40
1970	79.45	100.00	91.19	100.00	78.69	95.90	58.41	77.28	13.23	~	~	78.93
1971	80.96	100.00	88.36	100.00	80.92	100.24	45.93	77.72	83.90	~	~	80.82
1972	80.05	99.86	86.94	100.00	79.14	104.67	54.01	80.53	74.30	~	~	81.17
1973	76.55	99.82	83.91	100.00	75.35	~	42.49	77.03	82.80	~	~	84.36
1974	77.49	99.60	91.03	~	75.68	~	65.94	77.02	95.95	84.91	99.94	85.04
1975	72.54	77.04	90.57	~	71.24	~	57.97	73.37	86.20	74.59	99.95	100.00
1976	71.12	83.77	90.37	~	69.65	~	52.13	78.67	109.31	68.60	10.00	100.00
1977	68.90	82.14	89.71	~	66.61	~	62.69	78.61	107.98	72.00	10.29	100.00
1978	69.14	84.20	87.71	~	66.57	~	62.19	81.63	123.49	73.16	99.06	100.00
1979	68.02	76.83	86.95	~	64.94	~	80.20	82.62	100.35	70.68	100.00	100.00

SOURCE: Calculated from table E10.

Table E10  
**BANXICO PERSPECTIVE OF TOTAL DIRECT FOREIGN INVESTMENT IN MEXICO**  
**FROM ALL COUNTRIES, 1938-79**  
 (T Pesos)

Year	Total DFI	Agri- culture	Mining	Petroleum	Manu- facturing	Electricity	Con- struction	Trade	Trans- portation	Financial Services	Communal Services	Other Activities
1938	2,025,072	40,963	518,870	4,629	118,792	644,434	~	70,272	621,154	~	~	5,968
1939	2,166,728	39,647	532,553	4,639	135,556	666,549	~	70,513	711,758	~	~	5,513
1940	2,178,197	40,300	521,519	5,684	155,226	685,013	~	76,223	688,788	~	~	5,439
1941	2,196,381	42,789	554,742	5,687	187,004	660,593	~	90,784	648,143	~	~	6,639
1942	2,315,272	45,032	572,875	4,705	224,841	677,309	2,000	116,285	665,553	~	~	6,872
1943	2,382,251	53,513	593,814	4,673	278,646	652,955	3,288	113,523	685,715	~	~	16,124
1944	2,579,343	58,814	647,710	4,295	339,898	669,683	6,401	122,005	702,652	~	~	28,885
1945	2,758,248	58,251	654,128	4,292	484,076	660,517	19,533	139,368	705,710	~	~	32,373
1946	2,790,823	64,404	626,551	4,348	681,409	662,146	20,761	180,861	613,767	~	~	36,786
1947	3,000,309	60,511	604,514	4,805	817,028	683,761	21,626	288,780	477,886	~	~	41,298
1948	3,494,380	63,278	607,550	16,015	1,000,229	746,164	36,795	383,714	596,053	~	~	46,092
1949	4,153,593	33,954	805,750	42,837	1,185,128	867,161	47,964	466,302	653,432	~	~	51,056
1950	4,895,917	35,500	967,390	102,892	1,279,248	1,183,450	41,494	606,711	851,812	~	~	27,421
1951	5,840,731	60,879	1,372,928	73,162	1,565,287	1,312,542	27,559	883,295	523,931	~	~	31,149
1952	6,302,139	48,873	1,385,946	56,052	1,950,272	1,387,296	93,264	1,004,256	347,185	~	~	28,995
1953	6,829,063	55,767	1,423,340	118,989	2,232,513	1,489,711	95,124	1,012,136	343,976	~	~	47,506
1954	10,429,156	76,350	2,037,000	220,375	3,479,312	2,364,900	131,187	1,452,100	599,213	~	~	68,713
1955	11,910,113	221,350	2,181,375	188,913	4,343,375	2,392,488	144,325	1,835,525	712,613	~	~	80,150
1956	13,642,463	225,863	2,434,550	214,988	4,825,850	2,760,350	131,126	2,103,813	798,975	~	~	146,950
1957	14,563,526	226,013	2,242,850	151,925	5,851,301	2,689,300	104,313	2,231,975	897,050	~	~	168,800
1958	14,618,966	268,300	2,204,263	166,800	6,212,413	2,827,650	107,658	2,353,638	241,500	~	~	236,363
1959	15,559,143	218,750	2,635,113	86,450	6,666,088	3,007,050	110,325	2,285,075	320,050	~	~	230,243
1960	13,516,424	242,850	2,110,534	269,302	7,528,400	185,686	110,755	2,452,387	384,276	~	~	232,239
1961	14,129,587	242,325	1,771,663	266,875	8,576,538	158,350	133,725	2,610,263	87,813	~	~	292,038
1962	16,073,890	218,713	1,802,825	741,225	9,738,600	102,450	140,738	2,877,225	102,088	~	~	350,025
1963	17,716,233	231,313	1,893,075	762,025	11,183,138	128,338	135,400	2,947,625	71,813	~	~	373,705
1964	19,405,516	234,900	1,959,825	754,850	12,676,813	139,288	161,163	3,014,275	105,613	~	~	358,788
1965	21,809,058	228,477	1,651,552	558,291	15,014,826	146,122	122,436	353,374	115,611	~	~	408,279
1966	23,683,503	29,088	1,828,976	508,053	16,577,445	70,929	121,659	3,466,261	98,485	~	~	982,607
1967	25,447,868	31,968	1,656,927	479,118	18,587,032	29,590	128,319	3,294,601	88,814	~	~	1,152,129
1968	28,122,144	74,475	1,655,374	477,604	20,956,436	32,191	116,061	3,101,697	108,246	~	~	1,600,060
1969	31,300,302	58,791	1,760,631	110,725	23,609,329	34,356	97,448	3,628,781	118,387	~	~	1,881,854
1970	35,198,705	386,204	1,942,075	118,241	26,211,945	37,178	122,104	5,448,849	588,902	~	~	843,207
1971	37,368,575	443,075	1,681,311	91,562	28,114,769	36,025	85,075	5,919,083	94,588	~	~	902,984
1972	39,596,677	503,638	1,883,822	101,388	29,685,581	36,113	60,700	6,427,573	126,271	~	~	771,593
1973	45,180,741	563,713	2,161,511	98,588	34,488,501	37,800	70,288	6,676,001	120,106	~	~	964,234
1974	51,535,395	144,074	2,262,784	~	39,416,860	~	195,628	4,335,794	210,305	~	~	40,601
1975	57,261,224	163,466	2,290,436	~	44,446,883	~	227,923	4,823,034	236,366	~	~	7,046
1976	65,524,343	197,452	2,457,977	~	51,169,552	~	301,306	4,558,563	297,818	~	~	5,121
1977	84,289,101	197,901	3,202,752	~	66,967,780	~	548,320	5,171,572	248,798	~	~	5,686
1978	107,696,337	261,670	3,715,755	~	84,230,788	~	1,035,892	7,965,876	124,777	~	~	108,619
1979	151,519,161	274,232	4,454,015	~	114,475,152	~	1,816,849	12,878,039	171,630	~	~	6,305
										4,872,922	66,427	8,969
										5,009,340	66,730	
										6,464,725	717,829	
										7,845,077	101,205	
										10,246,555	108,619	
										17,310,881	129,394	

SOURCE: Banco de México, *Estadísticas Históricas: Inversión Extranjera Directa* (México: Banco de México, 1982).

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Table E11  
TOTAL DIRECT FOREIGN INVESTMENT IN MEXICO FROM ALL COUNTRIES, 1948-79  
(M US)

Year	Exchange Rate	Total	Agri- culture	Mining	Petroleum	Manu- facturing	Electricity	Con- struction	Trade	Trans- portation	Financial Services	Communal Services	Other Industries
1948	4.855	719.75	13.03	125.14	3.30	206.02	153.69	7.37	79.03	122.77	~	~	9.49
1949	8.65	480.18	3.93	93.15	4.95	137.01	100.25	5.54	53.91	75.54	~	~	5.90
1950	8.65	566.00	4.10	111.84	11.90	147.89	136.82	4.80	70.14	75.35	~	~	3.17
1951	8.65	675.23	5.88	158.72	8.46	180.96	151.74	3.19	102.12	60.57	~	~	3.60
1952	8.65	728.57	5.65	160.22	6.48	225.46	160.38	10.78	116.10	40.14	~	~	3.35
1953	8.65	789.49	6.45	164.55	13.76	258.09	173.38	11.00	117.01	39.77	~	~	5.49
1954	12.5	834.33	6.11	162.96	17.63	278.34	189.19	10.49	116.17	47.94	~	~	5.50
1955	12.5	952.81	17.71	174.51	15.91	347.47	191.40	11.55	146.84	57.01	~	~	6.41
1956	12.5	1,091.40	18.07	194.76	17.20	386.07	220.83	10.49	168.31	63.92	~	~	11.76
1957	12.5	1,165.08	18.08	179.43	12.15	468.10	215.14	8.35	178.56	71.76	~	~	13.50
1958	12.5	1,169.52	21.54	176.34	13.34	496.99	226.21	8.61	188.31	19.32	~	~	18.83
1959	12.5	1,244.73	17.50	210.81	6.92	533.29	240.56	8.83	182.81	25.60	~	~	18.42
1960	12.5	1,081.31	19.43	168.84	21.54	602.27	14.85	8.86	196.19	30.74	~	~	18.58
1961	12.5	1,130.37	19.39	141.73	20.55	686.12	12.67	10.70	208.82	7.03	~	~	23.36
1962	12.5	1,285.91	17.50	144.23	59.30	779.09	8.20	11.26	230.18	8.17	~	~	28.00
1963	12.5	1,417.30	18.51	151.45	60.16	894.65	10.27	10.83	235.81	5.73	~	~	29.90
1964	12.5	1,552.44	18.79	156.79	60.39	1,014.15	11.14	12.89	241.14	8.45	~	~	28.70
1965	12.5	1,744.72	18.28	132.12	44.66	1,201.19	11.69	9.79	28.27	9.25	~	~	32.66
1966	12.5	1,894.68	2.33	146.32	40.64	1,326.20	5.67	9.73	277.30	7.88	~	~	78.61
1967	12.5	2,035.83	2.56	132.55	38.33	1,486.96	2.37	10.27	263.57	7.11	~	~	92.17
1968	12.5	2,249.77	5.96	132.43	38.21	1,676.51	2.58	9.28	248.14	8.66	~	~	128.00
1969	12.5	2,504.02	4.70	140.85	8.86	1,888.75	2.75	7.80	290.30	9.47	~	~	150.55
1970	12.5	2,815.90	30.90	155.37	9.46	2,096.96	2.97	9.77	435.91	47.11	~	~	67.46
1971	12.5	2,989.49	35.45	134.50	7.33	2,249.18	2.88	6.81	473.53	7.57	~	~	72.24
1972	12.5	3,167.73	40.29	150.71	8.11	2,374.85	2.89	4.86	514.21	10.10	~	~	61.73
1973	12.5	3,614.46	45.10	172.92	7.89	2,759.08	3.02	5.62	534.08	9.61	~	~	77.14
1974	12.5	4,122.83	11.53	181.02	~	3,153.35	~	15.65	346.86	16.82	389.83	4.51	3.25
1975	12.5	4,580.90	13.08	183.23	~	3,555.75	~	18.23	385.84	18.91	400.75	4.54	.56
1976	19.95	3,284.43	9.90	123.21	~	2,564.89	~	15.10	228.50	14.93	324.05	35.98	.26
1977	22.736	3,707.30	8.70	140.87	~	2,945.45	~	24.12	227.46	10.94	345.05	4.45	.25
1978	22.724	4,739.32	11.52	163.52	~	3,706.69	~	45.59	350.55	5.49	450.91	4.78	.28
1979	22.803	6,644.70	12.03	195.33	~	5,020.18	~	79.68	564.75	7.53	759.15	5.67	.39

SOURCE: Calculated from table E10.

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Table E12  
**U.S. DIRECT INVESTMENT IN MEXICO, BY ACTIVITY, AS PERCENTAGE OF TOTAL DIRECT FOREIGN INVESTMENT FROM ALL COUNTRIES, AND AS PERCENTAGE OF TOTAL U.S. DIRECT INVESTMENT, 1938-79**

Year	U.S. Total as % of Total DFI	Activity as % of Total U.S. Investments												
		Agri- culture	Mining	Petroleum	Manu- facturing	Electricity	Con- struction	Trade	Trans- portation	Financial Services	Communal Services	Other Industries		
1938	60.42	1.24	37.25	.38	8.39	23.64	~	5.11	23.50	~	~	~	~	.49
1939	61.31	1.07	36.93	.36	8.81	23.14	~	4.66	24.63	~	~	~	~	.41
1940	61.37	1.17	36.78	.43	10.27	21.72	~	4.97	25.26	~	~	~	~	.41
1941	61.33	1.37	36.17	.42	12.29	21.76	~	6.08	21.43	~	~	~	~	.48
1942	63.92	1.41	33.76	.32	13.52	19.72	.14	7.10	23.67	~	~	~	~	.46
1943	66.17	1.66	33.24	.30	15.69	18.69	.21	6.59	22.57	~	~	~	~	1.04
1944	66.62	1.94	32.85	.25	17.52	17.55	.31	6.46	21.44	~	~	~	~	1.68
1945	68.74	1.72	30.32	.23	23.22	15.99	1.03	6.88	18.92	~	~	~	~	1.69
1946	73.78	1.88	26.23	.21	26.41	14.63	1.01	8.06	16.79	~	~	~	~	1.77
1947	76.63	1.85	23.20	.21	31.24	13.94	.95	10.13	16.66	~	~	~	~	1.81
1948	70.40	~	~	.65	~	~	~	~	~	~	~	~	~	~
1949	72.59	~	~	1.42	~	~	1.46	~	~	~	~	~	~	~
1950	68.86	1.05	21.98	3.05	34.73	13.65	1.18	15.03	8.55	~	~	~	~	.81
1951	69.53	1.03	27.81	1.80	34.75	11.28	.65	18.81	3.10	~	~	~	~	.77
1952	75.69	.98	26.78	1.18	37.58	10.75	1.93	18.61	2.68	~	~	~	~	.61
1953	73.06	1.05	25.05	1.83	40.08	15.97	1.88	17.36	1.68	~	~	~	~	.79
1954	70.51	.84	23.74	2.54	41.39	10.54	1.76	16.73	1.42	~	~	~	~	.83
1955	77.43	2.34	20.76	1.78	39.62	11.47	1.54	17.09	7.67	~	~	~	~	.82
1956	78.44	2.05	19.98	1.67	39.38	16.09	1.21	17.09	7.43	~	~	~	~	1.30
1957	83.01	1.83	16.15	.99	40.91	8.12	.85	16.32	7.38	~	~	~	~	1.32
1958	76.66	2.20	17.44	1.44	46.84	8.63	.94	18.67	2.14	~	~	~	~	1.46
1959	74.07	1.73	19.60	.75	47.28	1.12	.96	17.37	2.72	~	~	~	~	1.41
1960	83.20	1.99	15.69	2.39	54.27	1.39	.97	18.80	3.33	~	~	~	~	1.41
1961	85.29	1.85	13.36	2.13	59.43	.84	1.10	18.85	.67	~	~	~	~	1.31
1962	84.99	1.46	11.94	5.43	59.16	.94	1.00	18.09	.69	~	~	~	~	1.50
1963	84.65	1.34	11.31	5.01	62.67	.93	.73	16.22	.39	~	~	~	~	1.47
1964	83.51	1.26	10.77	4.66	64.75	.90	.83	15.00	.58	~	~	~	~	1.30
1965	83.51	1.09	8.37	3.07	68.31	.39	.61	15.84	.53	~	~	~	~	1.39
1966	83.61	.15	8.74	2.57	68.94	.15	.56	14.76	.43	~	~	~	~	3.50
1967	80.00	.16	7.61	2.35	71.91	.16	.52	12.74	.37	~	~	~	~	4.19
1968	81.09	.33	6.76	2.09	73.95	.15	.34	10.77	.37	~	~	~	~	5.24
1969	79.17	.24	6.54	.45	76.30	.15	.25	11.18	.40	~	~	~	~	5.50
1970	79.45	1.38	6.33	.42	73.76	.13	.26	15.06	.28	~	~	~	~	2.38
1971	80.96	1.46	4.91	.30	75.19	.12	.13	15.21	.26	~	~	~	~	2.41
1972	80.05	1.59	5.17	.32	74.11	.12	.10	16.33	.30	~	~	~	~	1.98
1973	76.55	1.63	5.24	.29	75.14	.29	.09	14.87	.29	~	~	~	~	2.35
1974	77.49	.36	5.16	~	74.70	~	.32	8.36	.50	10.36	~	~	~	.09
1975	72.64	.30	4.89	~	76.23	~	.32	8.52	.49	9.00	~	~	~	.02
1976	71.12	.35	4.77	~	76.48	~	.34	7.70	.70	8.50	~	~	~	.01
1977	68.90	.28	4.95	~	76.81	~	.59	7.00	.46	9.73	~	~	~	.02
1978	69.14	.30	4.38	~	75.30	~	.87	8.73	.21	10.07	~	~	~	.01
1979	68.02	.20	3.76	~	72.13	~	1.41	10.32	.17	11.87	~	~	~	.01

SOURCE: Calculated from table E7.



**Table E13**  
**PERCENTAGE CHANGE OF U.S. DIRECT INVESTMENT IN MEXICO, 1938-79**

Year	Total DFI		U.S. Investments											Other Industries
	In Mexico	U.S. Total	Agri- culture	Mining	Petroleum	Manu- facturing	Electricity	Con- struction	Trade	Trans- portation	Financial Services	Communal Services		
1938	7.00	8.58	-6.22	7.64	.22	14.01	6.31	~	-1.34	13.82	~	~	~	-7.82
1939	.53	.62	9.59	-2.52	22.53	17.22	-5.55	~	7.64	3.20	~	~	~	-1.34
1940	.83	.76	17.68	1.87	.05	20.80	.92	~	23.25	-14.54	~	~	~	22.06
1941	5.41	9.87	12.92	2.56	-17.27	20.85	-42	~	28.41	20.87	~	~	~	3.51
1942	2.89	4.91	23.89	3.28	-68	21.74	-55	~	-2.63	.47	~	~	~	134.83
1943	8.27	10.70	29.29	9.39	-8.09	23.64	3.92	~	8.44	5.12	~	~	~	79.14
1944	6.94	10.33	-2.35	1.84	-07	46.24	.52	~	17.47	-2.62	~	~	~	11.21
1945	1.18	8.60	19.31	-6.06	1.30	37.54	-.63	~	27.31	-3.62	~	~	~	13.74
1946	7.51	10.19	8.09	-2.54	10.51	17.05	5.01	~	38.51	9.36	~	~	~	12.35
1947	16.47	8.42	-100.00	-100.00	233.30	-100.00	-100.00	~	-100.00	-100.00	~	~	~	-100.00
1948	18.86	22.57	~	~	167.48	~	~	~	~	~	~	~	~	~
1949	17.87	11.82	~	~	140.19	~	~	~	~	~	~	~	~	~
1950	19.30	20.46	18.54	52.45	-28.89	20.50	-.42	~	50.75	-56.42	~	~	~	13.70
1951	7.90	17.45	11.47	8.86	-23.39	27.03	11.96	~	16.18	-1.91	~	~	~	-7.00
1952	8.36	4.61	11.92	1.66	62.64	11.55	64.32	~	-2.38	-31.97	~	~	~	35.41
1953	52.72	47.38	17.61	39.64	105.01	52.19	-2.13	~	41.98	24.18	~	~	~	54.83
1954	14.20	25.41	251.00	9.69	-12.92	20.05	36.51	~	28.10	578.77	~	~	~	24.87
1955	14.55	16.04	1.87	11.69	9.80	15.35	62.81	~	16.06	12.40	~	~	~	83.26
1956	6.75	12.98	.49	-8.67	-32.88	17.35	-43.02	~	7.89	12.32	~	~	~	15.03
1957	.38	-8.51	10.21	-1.24	32.53	4.75	-3.83	~	4.68	-73.50	~	~	~	1.50
1958	6.43	4.19	-17.97	17.13	-45.62	5.18	-86.35	~	-3.06	32.51	~	~	~	.16
1959	-13.13	-2.42	12.08	-21.92	211.51	12.00	21.68	~	5.63	19.47	~	~	~	-2.30
1960	4.54	7.16	-0.23	-8.72	-4.61	17.34	-36.27	~	7.47	-78.42	~	~	~	-.58
1961	13.76	13.35	-10.58	1.29	188.55	12.84	26.53	~	8.76	16.47	~	~	~	29.64
1962	10.22	9.78	.46	3.95	1.46	16.29	8.53	~	-1.55	-37.71	~	~	~	7.87
1963	9.54	8.06	1.79	2.96	.38	11.65	4.91	~	-.12	59.73	~	~	~	-4.38
1964	12.39	12.38	-3.15	-12.64	-26.03	18.56	-51.46	~	18.67	3.45	~	~	~	19.87
1965	8.59	8.73	-85.28	13.47	-9.01	9.74	-58.28	~	1.36	-12.63	~	~	~	174.18
1966	7.45	2.81	9.90	-10.49	-5.70	7.23	8.79	~	-11.25	-11.52	~	~	~	23.06
1967	10.51	12.01	132.97	-.42	-.32	15.19	6.73	~	-5.36	13.14	~	~	~	40.23
1968	11.30	8.67	-21.06	6.10	-76.82	10.65	8.21	~	12.85	17.28	~	~	~	13.96
1969	12.45	12.85	556.91	9.25	6.79	10.53	-3.10	~	51.98	-21.61	~	~	~	-51.15
1970	6.16	8.19	14.73	-16.11	-22.48	10.30	.24	~	9.26	1.86	~	~	~	9.66
1971	5.96	4.77	13.51	10.24	10.61	3.28	4.67	~	12.51	18.22	~	~	~	-14.19
1972	14.10	9.11	11.88	10.73	-2.76	10.63	-100.00	~	-.64	5.99	~	~	~	29.88
1973	14.06	15.46	-74.50	13.57	-100.00	14.79	~	~	-35.06	102.70	~	~	~	-95.76
1974	11.11	4.02	-12.24	.71	~	6.14	~	~	5.97	1.08	~	~	~	-79.59
1975	14.43	12.19	31.35	7.08	~	12.56	~	~	1.34	59.78	~	~	~	-27.32
1976	28.64	24.62	-1.73	29.35	~	25.16	~	~	13.36	-17.48	~	~	~	11.23
1977	27.77	28.21	36.55	13.44	~	25.69	~	~	59.96	-42.64	~	~	~	10.69
1978	40.69	38.42	-4.38	18.82	~	32.58	~	~	63.62	11.77	~	~	~	42.25

SOURCE: Calculated from table E7.

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Table E14  
REAL U.S. DIRECT INVESTMENT IN MEXICO, 1948-79  
(M US)

Year	U.S. Export Price Index (1970=100)	Total DFI in Mexico	U.S. Investments														
			U.S. Total	Agric- culture	Mining	Petroleum	Manu- facturing	Electricity	Con- struction	Trade	Trans- portation	Financial Services	Communal Services	Other Industries			
1948	74.80	962.23	677.41	~	~	4.41	~	~	~	9.86	~	~	~	~	~	~	~
1949	69.60	689.92	500.83	~	~	7.12	~	~	~	7.97	~	~	~	~	~	~	~
1950	67.80	834.81	574.88	6.02	126.34	17.54	199.88	78.46	6.76	6.76	86.40	49.18	~	~	~	4.67	~
1951	77.70	869.02	604.25	6.23	168.07	10.89	209.96	68.17	3.94	3.94	113.65	18.70	~	~	~	4.63	~
1952	77.30	942.52	713.35	6.98	183.90	8.38	268.10	76.72	13.79	13.79	132.72	18.44	~	~	~	4.33	~
1953	77.00	1,025.31	749.12	7.84	187.68	13.69	300.24	118.85	14.11	14.11	130.07	12.59	~	~	~	5.89	~
1954	76.70	1,102.16	777.12	6.49	184.48	19.75	321.63	81.88	13.70	13.70	129.99	11.01	~	~	~	6.42	~
1955	76.70	1,242.25	961.84	22.49	199.71	16.98	381.09	110.31	14.80	14.80	164.34	73.74	~	~	~	7.90	~
1956	80.00	1,364.25	1,070.11	21.96	213.86	17.87	421.46	172.19	12.99	12.99	182.86	79.47	~	~	~	13.88	~
1957	82.20	1,417.37	1,176.63	21.48	190.08	11.67	481.35	95.49	10.04	10.04	192.02	86.87	~	~	~	15.54	~
1958	81.40	1,436.75	1,087.06	23.91	189.57	15.62	509.16	92.74	10.27	10.27	202.93	23.25	~	~	~	15.92	~
1959	81.40	1,529.15	1,132.63	19.61	222.05	8.50	535.55	12.66	10.72	10.72	196.71	30.80	~	~	~	15.95	~
1960	81.90	1,320.29	1,098.50	21.85	172.31	26.31	596.18	15.31	10.68	10.68	206.53	36.58	~	~	~	15.49	~
1961	83.60	1,353.73	1,154.64	21.38	154.28	24.61	686.15	9.72	12.66	12.66	217.70	7.74	~	~	~	15.10	~
1962	83.00	1,549.29	1,316.70	19.23	157.21	71.44	778.93	12.37	13.14	13.14	238.21	9.07	~	~	~	19.70	~
1963	83.00	1,707.59	1,445.44	19.32	163.41	72.48	905.83	13.43	10.62	10.62	234.51	5.65	~	~	~	21.25	~
1964	83.80	1,852.56	1,547.08	19.48	166.65	72.06	1,001.69	13.95	12.84	12.84	232.00	8.94	~	~	~	20.12	~
1965	86.40	2,019.36	1,686.27	18.30	141.20	61.70	1,151.89	6.57	10.24	10.24	267.03	8.97	~	~	~	23.40	~
1966	89.00	2,128.85	1,779.90	2.61	155.54	45.67	1,227.13	2.66	9.93	9.93	262.75	7.61	~	~	~	62.27	~
1967	90.80	2,242.10	1,793.62	2.82	136.47	42.21	1,289.76	2.84	9.38	9.38	228.57	6.60	~	~	~	75.11	~
1968	92.10	2,442.75	1,980.71	6.47	133.98	41.49	1,464.73	2.98	6.79	6.79	213.25	7.36	~	~	~	103.85	~
1969	94.80	2,641.38	2,091.14	4.96	136.80	9.34	1,574.70	3.14	5.27	5.27	233.80	8.39	~	~	~	114.98	~
1970	100.00	2,815.90	2,237.11	30.90	141.68	9.46	1,650.05	2.88	5.71	5.71	336.86	6.23	~	~	~	53.24	~
1971	103.10	2,899.60	2,347.64	34.38	115.28	7.11	1,765.27	2.80	3.03	3.03	356.98	6.16	~	~	~	56.63	~
1972	106.50	2,974.40	2,381.13	37.78	123.03	7.62	1,764.64	2.84	2.46	2.46	388.80	7.05	~	~	~	47.05	~
1973	124.10	2,912.54	2,229.58	36.27	116.91	6.36	1,675.32	~	1.93	1.93	331.51	6.41	~	~	~	52.44	~
1974	158.41	2,602.63	2,016.71	7.25	104.02	~	1,506.53	~	6.52	6.52	168.65	10.18	208.97	~	~	1.74	~
1975	177.00	2,588.08	1,877.48	5.69	93.76	~	1,431.14	~	5.97	5.97	159.95	9.21	168.89	~	~	.32	~
1976	183.00	1,794.77	1,276.47	4.53	60.84	~	976.24	~	4.30	4.30	98.23	8.92	121.30	~	~	.14	~
1977	189.50	1,956.36	1,347.96	3.77	66.69	~	1,035.38	~	7.98	7.98	94.36	6.24	131.09	~	~	.24	~
1978	202.60	2,339.25	1,617.36	4.79	70.79	~	1,217.88	~	13.99	13.99	141.25	3.35	162.84	~	~	.14	~
1979	230.60	2,881.48	1,960.04	4.01	73.65	~	1,413.71	~	27.71	27.71	16	3.28	232.69	~	~	.14	~

SOURCE: Calculated from table E8.

Table E15

## USDC PERSPECTIVE OF U.S. DIRECT INVESTMENT IN MEXICO, 1929-87

(M US)

Year	U.S. Total	Agri- culture	Mining	Petroleum	Manu- facturing	Trans- portation	Trade	Financial Services	Other Industries
1929	682.00	~	~	~	~	~	~	~	~
1936	480.00	~	~	~	~	~	~	~	~
1943	286.00	~	~	~	~	~	~	~	~
1950	414.00	3.00	121.00	13.00	133.00	107.00	30.00	2.00	6.00
1951	468.00	~	126.00	9.00	194.00	87.00	41.00	~	11.00
1952	481.00	~	128.00	10.00	205.00	89.00	38.00	~	11.00
1953	497.00	~	138.00	11.00	207.00	89.00	39.00	~	11.00
1954	503.00	~	135.00	13.00	208.00	88.00	44.00	~	16.00
1955	577.00	~	143.00	15.00	262.00	87.00	54.00	~	16.00
1956	667.00	~	158.00	22.00	309.00	88.00	72.00	~	19.00
1957	739.00	10.00	139.00	31.00	335.00	134.00	68.00	3.00	19.00
1958	745.00	~	139.00	32.00	326.00	120.00	84.00	~	34.00
1959	758.00	~	137.00	30.00	353.00	118.00	84.00	~	36.00
1960	795.00	~	130.00	32.00	391.00	119.00	85.00	~	39.00
1961	830.00	~	129.00	54.00	418.00	29.00	97.00	~	104.00
1962	867.00	~	121.00	73.00	442.00	26.00	93.00	~	107.00
1963	907.00	~	116.00	65.00	502.00	25.00	111.00	~	105.00
1964	1,034.00	~	128.00	56.00	606.00	27.00	138.00	~	106.00
1965	1,182.00	~	104.00	48.00	756.00	27.00	136.00	~	110.00
1966	1,329.00	~	95.00	29.00	927.00	20.00	151.00	~	39.00
1967	1,426.00	~	~	26.00	1,016.00	18.00	165.00	~	~
1968	1,566.00	~	97.00	25.00	1,147.00	19.00	179.00	~	59.00
1969	1,756.00	~	117.00	15.00	1,277.00	20.00	207.00	~	94.00
1970	1,912.00	~	127.00	10.00	1,380.00	23.00	224.00	~	122.00
1971	1,980.00	~	103.00	7.00	1,492.00	26.00	263.00	~	82.00
1972	2,161.00	~	98.00	10.00	1,631.00	26.00	305.00	~	82.00
1973	2,379.00	~	85.00	10.00	1,800.00	31.00	400.00	~	88.00
1974	2,854.00	~	83.00	18.00	2,173.00	34.00	476.00	~	550.00
1975	3,200.00	~	80.00	22.00	2,443.00	35.00	453.00	~	87.00
1976	2,984.00	~	88.00	17.00	2,223.00	47.00	502.00	~	105.00
1977	3,230.00	~	98.00	26.00	2,391.00	~	563.00	~	~
1978	3,712.00	~	97.00	41.00	2,752.00	~	537.00	~	~
1979	4,490.00	~	76.00	145.00	3,451.00	508.00	727.00	~	~
1980	5,989.00	~	95.00	150.00	4,489.00	750.00	878.00	~	~
1981	6,962.00	~	77.00	189.00	5,140.00	846.00	626.00	~	~
1982	5,584.00	~	~	193.00	4,166.00	726.00	352.00	~	327.00
1983	4,381.00	~	~	75.00	3,446.00	430.00	410.00	~	261.00
1984	4,568.00	~	~	76.00	3,632.00	461.00	522.00	~	257.00
1985	5,070.00	~	~	52.00	4,073.00	774.00	456.00	~	~
1986	4,826.00	~	~	42.00	3,926.00	841.00	277.00	~	~
1987	4,997.00	~	~	65.00	3,959.00	1,018.00	~	~	~

SOURCE: U.S. Department of Commerce, *Statistical Abstract of the United States* (Washington, D.C.: USDC).

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Table E16

**U.S. DIRECT INVESTMENT IN MEXICO, BY ACTIVITY, AS PERCENTAGE OF  
TOTAL U.S. DIRECT INVESTMENT, 1950-87**

Year	Agriculture	Mining	Petroleum	Manufacturing	Transportation	Trade	Financial Services	Other Industries
1950	.72	29.23	3.14	32.13	25.85	7.25	.48	1.45
1951	~	26.92	1.92	41.45	18.59	8.76	~	2.35
1952	~	26.61	2.08	42.62	18.50	7.90	~	2.29
1953	~	27.77	2.21	41.65	17.91	7.85	~	2.21
1954	~	26.84	2.58	41.35	17.50	8.75	~	3.18
1955	~	24.78	2.60	45.41	15.08	9.36	~	2.77
1956	~	23.69	3.30	46.33	13.19	10.79	~	2.85
1957	1.35	18.81	4.19	45.33	18.13	9.20	.41	2.57
1958	~	18.66	4.30	43.76	16.11	11.28	~	4.56
1959	~	18.07	3.96	46.57	15.57	11.08	~	4.75
1960	~	16.35	4.03	49.18	14.97	10.69	~	4.91
1961	~	15.54	6.51	50.36	3.49	11.69	~	12.53
1962	~	13.96	8.42	50.98	3.00	10.73	~	12.34
1963	~	12.79	7.17	55.35	2.76	12.24	~	11.58
1964	~	12.38	5.42	58.61	2.61	13.35	~	10.25
1965	~	8.80	4.06	63.96	2.28	11.51	~	9.31
1966	~	7.15	2.18	69.75	1.50	11.36	~	2.93
1967	~	~	1.82	71.25	1.26	11.57	~	~
1968	~	6.19	1.60	73.24	1.21	11.43	~	3.77
1969	~	6.66	.85	72.72	1.14	11.79	~	5.35
1970	~	6.64	.52	72.18	1.20	11.72	~	6.38
1971	~	5.20	.35	75.35	1.31	13.28	~	4.14
1972	~	4.53	.46	75.47	1.20	14.11	~	3.79
1973	~	3.57	.42	75.66	1.30	16.81	~	3.70
1974	~	2.91	.63	76.14	1.19	16.68	~	19.27
1975	~	2.50	.69	76.34	1.09	14.16	~	2.72
1976	~	2.95	.57	74.50	1.58	16.82	~	3.52
1977	~	3.03	.80	74.02	~	17.43	~	~
1978	~	2.61	1.10	74.14	~	14.47	~	~
1979	~	1.69	3.23	76.86	11.31	16.19	~	~
1980	~	1.59	2.50	74.95	12.52	14.66	~	~
1981	~	1.11	2.71	73.83	12.15	8.99	~	~
1982	~	~	3.46	74.61	13.00	6.30	~	~
1983	~	~	1.71	78.66	9.82	9.36	~	5.86
1984	~	~	1.66	79.51	10.09	11.43	~	5.96
1985	~	~	1.03	80.34	15.27	8.99	~	5.63
1986	~	~	.87	81.35	17.43	5.74	~	~
1987	~	~	1.30	79.23	20.37	~	~	~

SOURCE: Calculated from table E15.

Table E17  
PERCENTAGE CHANGE OF U.S. DIRECT INVESTMENT IN MEXICO, 1950-87

Year	U.S. Total	Mining	Petroleum	Manufacturing	Transportation	Trade	Other Industries
1950	~	~	~	~	~	~	~
1951	13.04	4.13	-30.77	45.86	-18.69	36.67	83.33
1952	2.78	1.59	11.11	5.67	2.30	-7.32	~
1953	3.33	7.81	10.00	.98	~	2.63	~
1954	1.21	-2.17	18.18	.48	-1.12	12.82	45.45
1955	14.71	5.93	15.38	25.96	-1.14	22.73	~
1956	15.60	10.49	46.67	17.94	1.15	33.33	18.75
1957	10.79	-12.03	40.91	8.41	52.27	-5.56	~
1958	.81	~	3.23	-2.69	-10.45	23.53	78.95
1959	1.74	-1.44	-6.25	8.28	-1.67	~	5.88
1960	4.88	-5.11	6.67	10.76	.85	1.19	8.33
1961	4.40	-.77	68.75	6.91	-75.63	14.12	166.67
1962	4.46	-6.20	35.19	5.74	-10.34	-4.12	2.88
1963	4.61	-4.13	-10.96	13.57	-3.85	19.35	-1.87
1964	14.00	10.34	-13.85	20.72	8.00	24.32	.95
1965	14.31	-18.75	-14.29	24.75	~	-1.45	3.77
1966	12.44	-8.65	-39.58	22.62	-25.93	11.03	-64.55
1967	7.30	~	-10.34	9.60	-10.00	9.27	~
1968	9.82	~	-3.85	12.89	5.56	8.48	~
1969	12.13	20.62	-40.00	11.33	5.26	15.64	59.32
1970	8.88	8.55	-33.33	8.07	15.00	8.21	29.79
1971	3.56	-18.90	-30.00	8.12	13.04	17.41	-32.79
1972	9.14	-4.85	42.86	9.32	~	15.97	~
1973	10.09	-13.27	~	10.36	19.23	31.15	7.32
1974	19.97	-2.35	80.00	20.72	9.68	19.00	525.00
1975	12.12	-3.61	22.22	12.43	2.94	-4.83	-84.18
1976	-6.75	10.00	-22.73	-9.01	34.29	10.82	20.69
1977	8.24	11.36	52.94	7.56	~	12.15	~
1978	14.92	-1.02	57.69	15.10	~	-4.62	~
1979	20.96	-21.65	253.66	25.40	~	35.38	~
1980	33.39	25.00	3.45	30.08	47.64	20.77	~
1981	16.25	-18.95	26.00	14.50	12.80	-28.70	~
1982	-19.79	~	2.12	-18.95	-14.18	-43.77	~
1983	-21.54	~	-61.14	-17.28	-40.77	16.48	-20.18
1984	4.27	~	1.33	5.40	7.21	27.32	-1.53
1985	10.99	~	-31.58	12.14	67.90	-12.64	~
1986	-4.81	~	-19.23	-3.61	8.66	-39.25	~
1987	3.54	~	54.76	0.84	21.05	~	~

SOURCE: Calculated from table E15.

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Table E18  
REAL U.S. DIRECT INVESTMENT IN MEXICO, 1948-87  
(M US of 1970)

Year	U.S. Export Price Index (1970=100)	U.S. Total	Agriculture	Mining	Petroleum	Manufacturing	Transportation, Communications	Trade	Financial Services	Other Industries
1948	~	~	~	~	~	~	~	~	~	~
1949	~	~	~	~	~	~	~	~	~	~
1950	67.8	610.62	4.42	178.47	19.17	196.17	157.82	44.25	2.95	8.85
1951	77.7	602.32	~	162.16	11.58	249.68	111.97	52.77	~	14.16
1952	77.3	622.25	~	165.59	12.94	265.20	115.14	49.16	~	14.23
1953	77	645.45	~	179.22	14.29	268.83	115.58	50.65	~	14.29
1954	75.7	664.46	~	178.34	17.17	274.77	116.25	58.12	~	21.14
1955	76.7	752.28	~	186.44	19.56	341.59	113.43	70.40	~	20.86
1956	80	833.75	~	197.50	27.50	386.25	110.00	90.00	~	23.75
1957	82.2	899.03	12.17	189.10	37.71	407.54	163.02	82.73	3.65	23.11
1958	81.4	915.23	~	170.76	39.31	400.49	147.42	103.19	~	41.77
1959	81.4	931.20	~	168.30	36.86	433.66	144.96	103.19	~	44.23
1960	81.9	970.70	~	158.73	39.07	477.41	145.30	103.79	~	47.62
1961	83.5	994.01	~	154.49	64.67	500.60	34.73	116.17	~	124.55
1962	83	1,044.58	~	145.78	87.95	532.53	31.33	112.05	~	128.92
1963	83	1,092.77	~	139.76	78.31	604.82	30.12	133.73	~	126.51
1964	83.8	1,233.89	~	152.74	66.83	723.15	32.22	164.68	~	126.49
1965	86.4	1,368.06	~	120.37	55.56	875.00	31.25	157.41	~	127.31
1966	89	1,493.26	~	106.74	32.58	1,041.57	22.47	169.66	~	43.82
1967	90.8	1,570.48	~	~	28.63	1,118.94	19.82	181.72	~	~
1968	92.1	1,700.33	~	105.32	27.14	1,246.39	20.63	194.35	~	64.06
1969	94.8	1,852.32	~	123.42	15.82	1,347.05	21.10	218.35	~	99.16
1970	100	1,912.00	~	127.00	10.00	1,380.00	23.00	224.00	~	122.00
1971	103.1	1,920.47	~	99.90	6.79	1,447.14	25.22	255.09	~	79.53
1972	106.5	2,029.11	~	92.02	9.39	1,531.46	24.41	286.38	~	77.00
1973	124.1	1,917.00	~	68.49	8.06	1,450.44	24.98	322.32	~	70.91
1974	158.4	1,801.77	~	52.40	11.36	1,371.84	21.46	300.51	~	347.22
1975	177	1,807.91	~	45.20	12.43	1,380.23	18.77	255.93	~	49.15
1976	183	1,630.60	~	48.09	9.29	1,214.75	25.68	274.32	~	57.38
1977	189	1,708.99	~	51.85	13.76	1,265.08	~	297.88	~	~
1978	202.6	1,832.18	~	47.88	20.24	1,358.34	~	265.05	~	~
1979	230.6	1,947.09	~	32.96	62.88	1,496.53	220.29	315.26	~	~
1980	261.8	2,287.62	~	36.29	57.30	1,714.67	286.48	335.37	~	~
1981	265.9	2,435.12	~	26.93	66.11	1,797.83	285.91	216.96	~	~
1982	289	1,932.18	~	~	66.78	1,441.52	251.21	121.80	~	113.15
1983	292.1	1,499.83	~	~	25.68	1,178.73	147.21	140.36	~	89.35
1984	296.1	1,542.72	~	~	25.67	1,226.61	155.69	176.29	~	86.80
1985	293.7	1,726.25	~	~	17.71	1,386.79	263.53	155.26	~	~
1986	294.5	1,638.71	~	~	14.26	1,333.11	285.57	94.06	~	~
1987	301.8	1,655.73	~	~	21.54	1,311.80	337.31	~	~	~

SOURCE: Calculated from table E15.









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