1978

Fiscal impact due to coal development in Big Horn and Rosebud Counties Montana

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FISCAL IMPACT DUE TO COAL DEVELOPMENT IN BIG HORN AND ROSEBUD COUNTIES, MONTANA

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B.A., University of Montana, 1970

Presented in partial fulfillment of the requirements for the degree of

Master of Business Administration

UNIVERSITY OF MONTANA

1978

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10/30/78
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THE PROBLEM AND ITS SETTING

Introduction

In recent years, greater awareness of the world's energy resources and their development has become commonplace. The controversy over the extent of world crude oil reserves and an apparent inability for the United States to sufficiently satisfy its oil demands from domestic sources, has brought this awareness to a head. It is currently referred to as an "energy crisis." Dependence upon the importation of foreign oil is an uncomfortable economical and political position for this nation. Therefore, the utilization of alternate energy sources is being urged by the present presidential administration. Coal is such a viable and plentiful alternative energy resource.

With this renewed interest in coal, mining and development of Montana's major coal fields has grown at an accelerated pace. In 1970, Montana's total annual coal production was approximately 3.5 million tons, but by the end of 1977, it had expanded to over 27.4 million tons which represents almost an eightfold increase within six years.[1] Projections made by Montana's Energy Research and Conservation Office for

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[1]Rick Itama, "Montana Historical Energy Statistics," Montana Energy Office, Capitol Station, Helena, Montana, February 1978, pp. 20-24.

the immediate decade indicate that production output will continue to significantly enlarge.[2]

The majority of the expanded coal production has come from four major strip mines: the Western Energy, Peabody, Westmoreland and Decker mines. The first two of these mines are located within Rosebud County near the community of Colstrip. The other two are in Big Horn County. The Westmoreland mine is located in the northeast corner of the county about twenty-five miles east of Hardin. The Decker mine, the largest in the state, is situated in the southeastern portion of the county near the Montana-Wyoming border. (See Appendix 4.)

This study involves a measurement of the fiscal impact on the local governments in Big Horn and Rosebud counties. In this chapter many of the factors surrounding this task are introduced by looking at the problem and its setting, outlining the scope of the study, defining some major terms, formulating a hypothesis on the probable results, listing some of the related literature to be reviewed, and briefly describing some of the data and methodologies which will be employed. In order to contrast the effects of coal development on government finances, the period from FY 1960 through FY 1970 will be referred to as the "pre-coal" period. After FY 1970, the period will be called simply the "coal" period. Although coal production had begun its upward climb prior to FY 1970, the coal tonnage at this point in time was at its highest level within the past 20 years and consequently, was beginning to have a more dramatic effect upon the surrounding communities.

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[2]Robert J. Robinson, "Coal Impact and Coal Board Grants," an unpublished report to the Legislative Finance Committee from the Office of the Legislative Fiscal Analyst, Helena, Montana, September 20, 1977, p. 2.

The Problem and Its Setting

Big Horn and Rosebud are sparsely populated counties that have been dependent upon agriculture as an economic base. As a consequence, there was not an abundant labor force that the coal producers could tap to satisfy their employment requirements. A large number of employees had to be recruited from outside the counties. A rapid increase in employment for a basic industry normally causes an even greater expansion in the population growth. From Table 1 it can be seen that for the period 1970 through 1977, Montana's growth rate is estimated to be 9.6 percent. Using similar estimates, Big Horn County's rate is calculated at 7.4 percent, but Rosebud County's rate is a significant 46.4 percent.

TABLE 1

POPULATION ESTIMATES

Entity	Census 1970	Estimates 1973	Estimates 1975	Estimates 1977	Percentage Increase (Decrease) from 1970-1977
Montana	694,409	727,000	746,000	761,000	9.6
Rosebud County	6,032	6,900	9,700	10,100	46.4
Forsyth	1,873	1,930	2,400	2,500	33.5
Big Horn County	10,057	10,300	10,900	10,800	7.4
Hardin	2,733	2,930	3,180	3,240	18.6
Lodge Grass	806	680	620	510	(36.7)

Source: Derived from the U.S. Bureau of the Census, Washington, D.C., Series P-25 and P-26, and interpolations from a population projection model developed by the Research and Information Systems Division, Department of Community Affairs, Helena, Montana.

The drastic growth is not evident for Big Horn County. However, much of the labor force for the Decker mine resides in Sheridan, Wyoming and does not show up in Big Horn County's population count.[3]

A rapid increase in the population will result in a surging demand for public services. This demand should be accompanied by an accelerated rise in local government expenditures. However, the mining operations and the population itself become new sources of tax revenue for funding public services. The critical question and the central problem of this study becomes whether or not new revenues exceed increased expenditures. If not, a negative fiscal impact exists, and alternative revenue sources must be sought to make up the shortage in order to sustain the current level of public services. This study will determine if a negative fiscal impact for the selected county and municipal local governments has developed, and it will determine the most likely school districts to be financially burdened, as a result of stimulated coal production in Big Horn and Rosebud counties.

In order to investigate this issue, the relevant revenue sources must be reviewed. The first major source to be studied deals with direct tax revenue prescribed for coal mining operations by Montana law. There are numerous coal mining taxes in Montana including: Property Tax, Net and Gross Proceeds Tax, Resource Indemnity Trust Tax, Coal Producer's Severance Tax, Corporation License Tax, etc. These taxes have the potential for generating substantial amounts of revenue for government entities.

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[3]Montana, Department of State Lands, "Proposed Plan of Mining and Reclamation - East Decker and North Extension Mines, Decker Coal Company, Big Horn County, Montana--Draft Environmental Impact Statement," Helena, Montana, 1976, p. 250.

However, because of the location of the coal mines and restrictions in Montana tax laws, the collection and distribution of these taxes is not necessarily made in relation to where the impact on public services is felt. For instance, municipalities in these two counties have in all likelihood borne a major portion of the population influx (see Table 1) and yet, receive very little from the collection of the aforementioned taxes. These issues are discussed in Chapter III.

A second revenue-related area concerns Montana's Coal Board. The Coal Board was established in 1975 to administer a portion of the coal severance tax revenue resulting from the Montana Strip Mine Reclamation Act of 1973 and subsequent amendments.[4] This portion of the revenue is issued in the form of grants to local governments demonstrating a fiscal impact because of coal development. The Board at present has been responsible for granting almost $15 million for various eligible projects. Approximately 89 percent of this total has benefited the local governments in Big Horn and Rosebud counties.[5] The study will research the significance of these grants and their relationship to the central problem. The results are contained in Chapter IV.

The other side of the fiscal picture is the expenditures. Unfortunately, greater government expenditures associated with coal development cannot be readily extracted from historical records. Therefore, analytical techniques must be employed to estimate a proportion of the actual recorded

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[4]Montana, Revised Codes, 1947, vol. 3, pt. 2, Section 50-1801.

[5]Derived from unpublished records maintained by the Coal Board Administrator, Department of Community Affairs, Helena, Montana.

expenditures that can be attributed to the coal boom. Details of the various methodologies utilized are presented in the Appendices. Also, Chapter V will deal with the expenditures in summary form and compare them to the revenue sources in the measurement of the fiscal impacts.

Based on a preliminary inspection of applicable literature, financial statistics and the population growth presented in Table 1, a hypothesis concerning expected research results is formulated, as follows: "Negative fiscal impact, defined as a negative reconciliation of collected revenue to local government expenditures as a direct consequence of coal development from 1970 to the present, does not generally exist for Big Horn County. However, a minor negative fiscal impact may have developed at the municipal level largely due to tax revenue distribution inequities inherent in Montana's tax laws. On the other hand, because of major population growth associated with coal development, negative fiscal impact has resulted for several of the local governments in Rosebud County." It is hoped that this research project will have compiled sufficient evidence to prove or disprove this hypothesis.

This study has been restricted to subject material that had a direct effect on the hypothesis. It will not be concerned with factors involving an impact on the physical and social environment. It will further be limited from looking at indirect economic benefits or plights associated with greater employment and higher personal income resulting from coal production jobs. Consequently, only those areas that clearly affect public services and can be reasonably measured, will be included.

The concept of fiscal impact has briefly been described. For the purposes of this study three other terms should be clarified. They are the forms of local government that will be addressed by the research

project and include: county, municipality, and school district. A county is the largest political division in Montana having corporate power. In addition, counties have geographical boundaries specifically designated by Montana law. They are normally governed by a three member commission elected by county constituents. Commissioners have the power to levy and collect various forms of designated county taxes, and have numerous other defined powers and duties necessary to provide public services for the welfare of county residents.[6] As previously mentioned, the study centers on Big Horn and Rosebud counties.

The second form of local government, a municipality, is classified as a city or town with the general powers of a corporation which in accordance with Montana law has petitioned and received such a designation. Population number is the normal characteristic that distinguished cities from towns. A city must have at least 1,000 residents, whereas a town must have 300 or more but less than 1,000 residents at the time of its formation. Any other population clusters with less than 300 persons cannot be incorporated and will be referred to in the research as a community in lieu of a city or town designation.

Cities and towns have various forms of government with prescribed powers and responsibilities outlined in the appropriate Montana Codes. Specific items that bear on the research problem will be detailed.[7] Big Horn County includes the City of Hardin and the Town of Lodge Grass; and Rosebud County's only municipality is the City of Forsyth.

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[6]Montana, Revised Codes, 1947, vol. 2, pt. 1, Title 16: Counties.

[7]Montana, Revised Codes, 1947, vol. 1, pt. 2, Title 11: Cities and Towns.

Finally, school districts are defined as a territory organized under the provisions of Title 75 Schools, Revised Codes of Montana, to provide public educational services under the jurisdiction of a Board of Trustees for the residents within the territorial boundaries. Both elementary and high school districts will be considered.[8] Characteristics unique to school district funding will be specifically delineated.

Hence, the setting of this study concerns the various local governments in Big Horn and Rosebud counties encased in a major industrial boom accelerated by a national energy crisis and new emphasis on coal as an energy source. The problem involves whether new potential revenue sources are sufficient to overcome expenditures necessary to satisfy greater demands for public services. The setting is unlikely to change for several years even though coal is a short run and limited solution to the energy crisis. The problem (if one is shown to exist) may become exacerbated by a failure to recognize it and take the necessary steps to deal with it.

The Review of Related Literature

There is an abundance of literature describing coal development and problems associated with it. It would be impossible to review it all and incorporate all the useful information. However, numerous research publications will be reviewed and several key documents selected for greater study because of their similarities and usefulness to this study. Since a more detailed review is contained in Chapter II, only a limited discussion of these documents will be made here.

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[8]Montana, Revised Codes, 1947, vol. 4, pt. 2, "Title 75 Schools."

The first document is an unpublished report addressed to the State Legislative Finance Committee on the subject of "Coal Impact and Coal Board Grants."[9] The report contends that the Coal Board is not following many of the statutory criteria for grant awards and recommends stronger enforcement of these criteria. This recommendation hinges on the conclusion that most of the grant recipients thus far have not experienced a fiscal impact at all. (Note: The meaning of fiscal impact used in this report is slightly different than the definition of negative fiscal impact presented above.) The lack of impact is measured fundamentally by comparing the level and trend of property tax mill levies of coal connected local governments to equivalent entities unaffected by coal. The report demonstrates that the mill levies in the coal development counties are some of the lowest in the state and therefore implies that a tax relief program is resulting from Coal Board Grants.

The second study that will receive some review is entitled, "Colstrip Montana: A Case Study in Rapid Population Growth and Local Finance."[10] Colstrip is the unincorporated community whose population has mushroomed as a direct result of coal mining and coal-fired electrical generation in Rosebud County. The study provides a brief historical review of some of the impacts on the local governments involved with providing public services to this community. It is also implied that initially local taxes went up and that only in recent years due to the major additions to the tax base from the coal industry have taxes been declining.

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[9]Robinson, "Coal Impact and Coal Board Grants," pp. 1-26.

[10]hnson, "Colstrip Montana: A Case Study in Rapid Local Finance," Montana Business Quarterly, Summer

Five other related documents will also receive some review. They provide descriptions of econometric techniques and policy-type information that will be useful in this study. A more detailed review of all these documents is contained in Chapter II.

The Data, Their Treatment, and Their Interpretation

Much of the data planned for utilization in the project is of a secondary nature. It has been collected from numerous statistical resources. Some of these embrace: 1) "City and Town Clerk Annual Reports" to the State Examiner which comprise accounting records in the form of revenues, expenditures, mill levies, and general indebtedness; 2) "Report of the State Department of Revenue" which provides a detailed breakdown of the statewide property tax system; 3) "Board of Trustee Reports" which record school finances; 4) Bureau of Census population estimates; etc. Numerous other unpublished documents that summarize data such as school enrollment and employment figures have also been used. In addition, data and results from other empirical research will be referenced and utilized where applicable.

The gathered data is to be analyzed and conclusions drawn. One methodology to be utilized includes the collection of similar data from counties completely isolated from the effects of the coal industry. These counties will be selected with a similar population and economic basis as Big Horn and Rosebud counties prior to 1970 when the upsurge in coal mining began. Once selected, they will form a baseline from which coal effects can be estimated. Then the level of public service expenditures before and after major coal producing activities in these

baseline counties will be compared with the coal mining counties with major differences assumed to be associated with coal activity. A second methodology will use a multiple regression technique to establish an algebraic relationship between basic employment and government expenditures. This will be a predictive relationship and will be used to estimate expenditures without the major coal development. The application of cost of living indexes is contemplated with this methodology to include inflationary effects. If appropriate, the results of these two methodologies will be combined in drawing the final conclusions.

In order to deal with the taxation issue and some of the distribution inequities, a detailed synopsis of applicable tax law will be presented. Also, the significance and amounts associated with these mining taxes will be analyzed. The Coal Board and its associated grants will receive a similar review. Finally, the revenue associated with coal production will be compared to the expenditures in estimating a measurement of fiscal impact.

Summary

This study embarks on a measurement of fiscal impact for local governments in Big Horn and Rosebud counties resulting from the recent impetus to the coal industry. It will consider both the revenue and the expenditure changes caused by the flurry in coal activity in the last seven fiscal years. Statutory or administrative issues that have a direct bearing on the impact consequences will also be discussed. Finally, based on study results, several conclusions and recommendations will be formulated.

The next chapter will provide a brief review of some of the literature pertinent to this study.

CHAPTER II

THE REVIEW OF THE RELATED LITERATURE

Introduction

The impending energy shortage has brought about the accelerated development of proven energy resources; in particular, coal. This development has been accompanied by considerable speculation and research on its impact on nearby communities and responsible governing agencies. In many cases, development has only been allowed to proceed after acceptable impact research has been completed. In other cases, the research was done to demonstrate the possibility and extent of impact, and often establish eligibility for relief funding.

Consequently, the amount of literature related to coal production is extensive, and it is difficult to lay claim that a new study will embark upon areas never before analyzed. Instead, some of this earlier work will be utilized, refined, and compiled to examine the fiscal impact on the various local governments. One justification for undertaking this study is the fact that uncertainty about coal-caused fiscal impact exists, which has not been satisfied by previous research. Also, a majority of the previous studies have concentrated on forecasting or production. This study, on the contrary, will look at the historical events that have already elapsed. However, many of the techniques used to forecast coal impact, can also be employed to measure the impact after it has occurred. The big difference is that the data utilized in the

historical review becomes actual estimates as opposed to projected figures for the forecast study. Thus, the review of the literature does provide useful insight on available techniques and background information.

Of the seven documents that will be cited, two are of a historical perspective, three provide a forecast of events under given scenarios, one outlines alternate strategies to mitigate the coal impact, and the last one presents a detailed coal taxation model. Each of these studies will be briefly described in the following sections.

Historical Literature

Probably the most closely related literature is a report dated September 20, 1977 on the subject of "Coal Impact and Coal Board Grants" and addressed to Montana's Legislative Finance Committee.[1] The report measures the coal impact on the local governments in Big Horn, Rosebud, and Treasure counties. The measurement technique is primarily a comparison of the mill levies and taxable valuation for the past several years to those of related entities in Montana. The three counties are compared with others of similar population and land area. These comparisons demonstrate that in recent years Big Horn and Rosebud counties have enjoyed some of the lowest mill levies for county operations and highest taxable valuations within the state. Such a conclusion for Treasure County is not readily evident. For instance, the report states that the mill levy for fiscal 1977 was 14.83 in Big Horn County, 22.117 in Rosebud County, and 46.40 in Treasure County. Meanwhile, the state average for all 56

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[1]Robinson, "Coal Impact and Coal Board Grants," pp. 1-26.

counties was 51.82 mills. From the data presented, it is apparent the substantial taxable valuations for Big Horn and Rosebud counties are the reason for the lower mill levies. The report suggests: "Far from having a negative impact on the counites' abilities to meet financial requirements, coal development has mushroomed the tax base past the counties' financial needs. (Witness falling millage and rising valuations.) The result has been a major tax break for the wealthiest area of the state."[2]

A similar mill levy analysis was performed on some of the rural improvement districts and incorporated communities within the three counties. Also, the report provides a listing of Coal Board Grants received by these entities. Although not specifically stated, it was insinuated that the coal development has served to increase the taxable valuation of the communities and this increase should eventually provide a sufficient source of tax revenue. Thus, the fiscal impact (if any) may largely be a timing problem in not having the tax base to support the initial development impact.

Next, the report discusses the impact on the schools and makes comparisons of the "financing ability" with other state school districts of similar enrollment size. The evidence supplied suggests that "the 'impacted' (within the three counties) districts are generally levying significantly fewer mills to finance the operations and building requirements."[3] Finally, a short review of Coal Board Grants received by these districts infers that need was not a basis for their award. The one exception was Rosebud Elementary School District No. 12.

The report concludes: 1) "...that, with few exceptions, the

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[2]Ibid, p. 11.

[3]Ibid, p. 22.

impacted units have the means to finance the required expenses without state support."; 2) "...it is questionable whether grants (Coal Board) awarded to date comply with the Board's own policies."; and 3) most of the grants "represent property tax relief to those areas most able to pay their own way."[4] Three recommendations are urged for adoption by the Coal Board. They are to "Approve grants only:[5]

1) "To units that tax themselves at levies equal to governmental units in similar geographic and demographic situations; and
2) To units that demonstrate increases in affected populations resulting from coal development; and
3) For projects that are similar in scope and cost to those of similar governmental units."

The second historical source is an article in the Montana Business Quarterly entitled "Colstrip Montana: A Case Study in Rapid Population Growth and Local Finance."[6] Colstrip, located in Rosebud County, is an unincorporated community which has grown as a direct result of coal mining and coal-fired electrical generation. Some settlement existed in the Colstrip area prior to the major coal activity, but this activity has caused a marked surge in population growth. For instance, the 1970 figure for the Colstrip census division was 442 and by 1976 this figure had grown to 2,682--a 507 percent increase.[7] It should be noted that population figures for the community of Colstrip itself, are unavailable. However, the dramatic increase has been almost entirely due to settlement

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[4]Ibid, pp. 25-26.

[5]Ibid, p. 26.

[6]Maxine C. Johnson, "Colstrip Montana: A Case Study," pp. 31-39.

[7]Ibid, p. 32.

within Colstrip proper. As a comparison, Rosebud County's growth during this same period was 59 percent.

A normal consequence of population growth is greater demand for public services. Since Colstrip is unincorporated, Rosebud County is primarily responsible to provide these needed services. The county expenditures to supply these services increased by 320 percent from fiscal 1966 to fiscal 1975.[8]

Greater expenditures must be balanced by more revenue collection, and traditionally, Montana relies heavily upon property taxation for its major local government revenue source. Rosebud County property tax collections did expand during this period, but perhaps more significant was the increased revenue from other sources. "Property tax collections (for Rosebud County) increased 133 percent between 1966 and 1975, but other sources of income grew an astounding, 1,059 percent--rising from $118,000 to $1,375,000."[9] For this latter figure, gifts and grants contributed the greatest amount, accounting for 30 percent of the total. Also, it is meaningful to note that of the total county revenue in fiscal 1975, property taxes represented only 40 percent.[10] Thus, there appears to be somewhat of a shift in the primary source of local revenue for Rosebud County.

Nevertheless, the substantial property tax increase during this period indicates that either the tax base increased or the mill levy was raised. As might be suspected, mill levies went up initially and then plunged as the tax base swelled due to coal production and electrical

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[8]Ibid, p. 34.

[9]Ibid, p. 36.

[10]Ibid, p. 37.

generation. "At its peak in 1972, Rosebud County's mill levy for county purposes ranked eighteenth among Montana's fifty-six counties; ....In 1976, only one county in the State (Musselshell) had a mill levy lower than Rosebud County;...."[11]

Revenues and expenditures are exact figures that can be computed and analyzed. However, they really say little about changes in the quality of government services. A deterioration in public services can co-exist with rising expenditures if these expenditures fail to keep pace with demand. Unfortunately, quality changes are not easily quantified and measured. According to this article a "fair judgment seems to be that services provided by the Rosebud County government remain limited. A few services, such as senior citizens' programs, have been added; some services, such as county roads, have declined in quality, but most probably are as adequate as they were pre-coal."[12]

Finally, the article explores some of the effects on the Colstrip district school system. Enrollments have climbed and, in fact, enrollment in the Colstrip public school by the fall of 1975 exceeded the 1965 figure by 248 percent.[13] School expenditures mounted in response to the enrollment gains. The taxation pattern to pay for these greater costs, was similar to the county government experience. "In 1975, of sixty-three school districts in Multi-County District 3, a district established by state government for planning purposes, only nineteen had higher total school levies than the Colstrip districts. In 1976, Colstrip levies declined significantly; in that year, forty-seven of the sixty-three

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[11]Ibid, p. 37.

[12]Ibid, p. 37.

[13]Ibid, p. 38.

districts had higher levies."[14] Thus, the Colstrip and Rosebud County experience has been a somewhat higher initial tax burden for its residents; followed by substantial tax relief because of the coal development's addition to the tax base.

Forecasting Literature

Although the next three studies to be referenced include considerable historical and background information, their prime purpose is to forecast coming events given certain assumptions and scenarios for future coal activity. They will not receive as detailed a review as the previous two documents, but instead, some of the forecasting techniques utilized that could apply to actual measurement methods, will be noted. Since the manuscripts are a source of background information, some of this research will be referred to in subsequent chapters.

In chronological order, the first publication is an economic forecast for the approval of two additional coal-fired electrical generating units, referred to as Colstrip Units 3 and 4.[15] The document poses three economic growth scenarios based on coal production at the Western Energy Coal Mine. The Western Energy Mine is affiliated with the Colstrip generation units and as such, its output is directly dependent upon the requirements of the generating units. The scenarios are essentially used to contrast the economic growth picture with and

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[14] Ibid, p. 39. Note: The counties in Multi-County District 3 are Carter, Custer, Fallon, Powder River, Rosebud, and Treasure.

[15] Montana, Department of Intergovernmental Relations, Norman J. Larson and C. R. Draper, "The Economic Impact of Proposed Colstrip Units 3 and 4 on the Rosebud County Economy," Research and Information Systems Division, Helena, Montana, August 15, 1976, pp. 1-91, plus Appendices.

without Colstrip Units 3 and 4. Projections are made using a Threshold Model through the year 1981. The Threshold Model utilizes a linear regression technique to define a relationship between basic employment and population. This is a predictive relationship and given assumptions about the amount of either one, it can be used to project the other.

This, of course, is an oversimplification of the methodology involved, but is illustrative of its intent. Once population and employment figures are determined, they provide a good indication of expected demands for public services because of their 'cause and effect' relationship. For the purpose of measuring the effects of coal activity, this modeling technique provides a useful method of isolation. A version of this technique will be used to estimate what the fiscal expenditures might have been in Big Horn and Rosebud counties if coal development had not occurred. Then a comparison to actual expenditures will provide some idea of the significance of coal on governmental costs.

A study by Paul Polzin includes projections associated with possible coal development in Rosebud, Big Horn, and Powder River counties.[16] Although these counties may contain the basic mining activity, its consequences reach out into the economies of other counties as well. This is particularly true since the three counties are primarily rural with an agricultural base, and rely heavily on their neighbors for much of their trading and service activities. Therefore, the study also projects impacts on a seven-county area which incorporates these three counties in its hub. The actual projections make use of several analytical

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[16]Paul E. Polzin, "Water Use and Coal Development in Eastern Montana," Bureau of Business and Economic Research, University of Montana, Missoula, Montana, November 1974, pp. 1-208, plus Appendix.

methodologies. However, one basic technique involves a comparison of these projections to another forecast prior to the advent of coal activity. This latter forecast was made in the late sixties by the Office of Business Economics of the U.S. Department of Commerce and the Economic Research Service of the U.S. Department of Agriculture.[17] An adaptation of this 'with and without' technique will be used in this study to provide a cross-check of the results obtained using the regression method noted above.

The final document in this section concentrates more on the pure fiscal impacts (government revenues and expenditures) as opposed to the usual impact considerations such as employment, earnings, and population.[18] However, these other economic considerations are not ignored since they are a prime reason for the fiscal changes. The econometric modeling technique used to forecast revenues and expenditures is quite complex and not germain to this study. The detailed discussions of Montana's tax legislation and mining development relief measures, however, provide useful information for reviewing the revenue issues associated with coal production outlined in Chapter I.

Other Literature

The last two publications to be cited provide general and policy type of information rather than actual or forecasted events. The first

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[17] Ibid, p. 115.

[18] John V. Krutilla, Anthony C. Fisher, and Richard E. Rice, "The Regional Economic and Fiscal Impacts of Energy Resource Development: A Case Study of Northern Great Plains Coal," Resources for the Future, Inc., Washington, D.C., August 1976, pp. 1-227.

document discusses some of the financial problems associated with the coal activity and then recommends strategies or alternatives to mitigate the consequences.[19] There are seven western states included in the study which offers some insight into additional solutions utilized by states other than Montana. It appears that Montana's position is somewhat less precarious than the other six states in providing an adequate financial solution to energy development problems. "Fortunately, the Montana state and local tax system has been designed to collect revenues rather quickly and at adequate levels when mining and related energy developments are undertaken."[20] "The tax structure has placed the state in the enviable position of having substantial revenues which may be used for new or additional facilities and public services, with an amount left over for trust funds."[21]

The final study focuses on the taxation issue associated with coal mining and its effects on government services.[22] The study utilizes a computer simulation model, called ENERGYTAX, to compare tax revenues for three hypothetical mines of varying production levels and their associated employees. The model also incorporates an estimation of the intergovernmental revenues directly attributable to coal development. (An

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[19]Leonard D. Bronder, Nancy Carlisle, and Michael D. Savage, Jr., "Financial Strategies for Alleviation of Socioeconomic Impacts in Seven Western States," Western Governors' Regional Energy Policy Office and the Federal Energy Administration, May 1977, pp. 1-575.

[20]Ibid, p. 84. [21]Ibid.

[22]U.S., Department of Agriculture, Economics, Statistics, and Cooperative Service, The Impact on Revenues of State and Local Governments by Thomas F. Stinson and Stanley W. Voelker, Agricultural Economic Report No. 394 (Washington, D.C.: Government Printing Office, 1978), pp. 1-66.

example of intergovernmental revenue would be state equalization funds under the school foundation program.) The model and its outputs provide useful information for examining the mining tax issue mentioned in Chapter I. The study includes the states of North Dakota, South Dakota, and Wyoming, in addition to Montana. Consequently, a vivid contrast is presented which generally indicates that Montana's coal-related taxes are higher than its neighboring states.

In addition, the report simulates tax collections for several levels of government within each state. It shows: "All levels of government are not equally well off,.... State governments, and to a lesser extent the counties, would receive revenues in excess of what might be expected to be their needs. But, the cities appear to be facing a major financial problem."[23] With less precise prediction, the tax consequences for school systems are also simulated.

Summary

The proliferation of coal-related literature provides a vast resource from which selection of appropriate ideas and methodologies may be made. Seven key documents have been cited in this section because they are most heavily relied upon in the ensuing study. Two of the seven documents are primarily historical in approach and have been more carefully reviewed since this is the approach of this research as well. The findings of both studies are related, and yet have some important differences. For instance, the Colstrip report points out that there were some initial tax increases in the early coal development years, and

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[23]Ibid, p. 19.

only in recent years has tax relief resulted. The other study bases most of its conclusions on the more recent years. Other differences exist which will become more apparent in next chapters.

Three of the manuscripts selected took more of a 'crystal ball' approach and provided a description of basic econometric techniques that can simulate or model the future advents. Some of these techniques will be adopted in estimating measurement of the impacts that have already occurred.

The last two citations include more general, or policy-type, information relating to coal and energy activity. The first publication relates to alternative strategies to further mitigate coal impact and the second publication explores in detail the taxation issue associated with energy production. In this same vein, the next chapter in this paper will investigate Montana's tax laws that are applicable to coal mining operations and expound on the various ramifications of these laws to the public sector.

CHAPTER III

MONTANA'S COAL MINING TAXATION

Introduction

An assessment of fiscal impact on the public sector would not be complete without some examination of the revenue sources. Taxes are the primary means of supporting public services. Thus, a close investigation of tax legislation relating to coal activity is appropriate to the fiscal impact determination and is the focus of this chapter.

There are really two forms of taxes associated with coal development: direct and indirect. The latter would include income taxes from new employment and higher personal earnings. In Montana, income taxes are collected by the Department of Revenue and earmarked for the State general fund, school foundation program, and a sinking fund for bond retirement.[1] With the exception of the school foundation program, the primary benificiary of this tax is the State and not the local governments in the coal development counties. As will be shown later, Big Horn and Rosebud counties currently reap little benefit from funds collected for this program. Consequently, for the purpose of this study, these indirect taxation sources will be ignored.

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[1]Layton S. Thompson, "The Taxation and Revenue Systems of State and Local Government in Montana as of 1977," Department of Agricultural Economics & Economics, Montana State University, Bozeman, Montana, June 1977, p. 20.

The direct taxation sources are dependent upon coal production and related facilities. The amount and/or value of production and facilities employed, are the determinants of the basis for these taxes. In some cases, the actual tax amount depends upon the discretion of the local taxing jurisdiction and the appropriation levied.

This chapter focuses on the mechanics involved in collecting and distributing these direct taxes. They will include: Property Tax, Net and Gross Proceeds Tax, Coal Producer's License and Severance Tax, Corporation License Tax, Electrical Energy Producer's Tax, Resource Indemnity Trust Tax, and Royalty Payments for State and Federal Lands Leases. Although these revenues do not all directly benefit the local governments, they are all intimately related to coal productions and appropriately should receive some review. Each one of these sources of revenue will be discussed separately. In addition to the mechanics of each tax source, factors concerning the intent of the tax, distribution inequities, significance to various public sectors, and some related controversies will be presented.

Property Tax

Traditionally, property taxes have been the mainstay for local government tax revenues in Montana. There has been a slight decline in its importance in recent years, but it still accounted for over one-half of Montana's total tax revenues in fiscal year 1977.[2] The coal activity has added industrial plant, equipment, and mineral production to the county taxable valuation, which forms the basis for property tax determination. This addition has generally been substantial. Thus, it is

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[2]Ibid, p. 4.

important to review some of the procedures followed in determining property taxes.

The Montana statutes have established nineteen different classes of property, each having its own assessment and taxable valuation schedule. Property is assessed by taking an established percentage of its fair market value. This process is performed by designated government officials. It is noteworthy that by law all taxable property after July 1, 1977, with the exception of agricultural land and mines will be assessed at 100 percent of its market value.[3] This exception will also apply to the Net and Gross Proceeds Tax to be discussed below.

Once the assessed value is determined, another schedule is used to set the taxable valuation for individual property items. It is the taxable valuation that is multiplied by an established mill levy to arrive at the property tax figure. However, the mill levy is based on an evaluation of the total taxable valuation for a taxing jurisdiction. In the budgeting process local governments subtract other expected revenues from property taxes. Using this value and the known taxable valuation, the necessary mill levy is determined.

Location is the key factor in determining the taxable valuation. Each taxing jurisdiction can levy only on property within its statutory boundaries, e.g., the county taxes all property within its legal boundaries, municipalities tax property located or having its principal residence within their corporate boundaries, school districts tax property falling in their district boundaries, etc. This location requirement will be important when some of the distribution inequities are discussed in the following paragraphs.

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[3]Ibid, p. 4.

Coal activity has had a major impact on the taxable valuation and in turn, property taxes for Big Horn and Rosebud counties. For purposes of illustration, Table 2 reflects the percentage change in Taxable Valuation and Per Capita Taxable Valuation from fiscal 1971 to fiscal 1978. This is also the time period of the most dramatic expansion of coal production.

TABLE 2

INCREASE IN TAXABLE VALUATION FROM

FISCAL 1971 TO FISCAL 1978

Entity	Percent Increase in Taxable Valuation	Percent Increase in Per Capita Taxable Valuation
Montana	54	40
Big Horn County	303	275
Hardin	35	14
Lodge Grass	7	62
Rosebud County	592	313
Forsyth	63	22

SOURCE: Derived from the Montana Taxpayers' Association, Helena, Montana publications entitled "Montana Property Tax Mill Levies," and "Montana Property Taxation," and interpolations of U.S. Bureau of Census population estimates.

Table 2 provides preliminary evidence that the tax bases for the two counties have grown at a rate far greater than the state average. The opposite is true for Hardin and Lodge Grass. However, in the case of Forsyth, the percapita figures provide a clearer picture. Although the actual taxable valuation increase has been slightly greater than the

state average increase, the reverse is true when the per capita taxable valuation is considered. This latter consequence is probably a direct result of Forsyth's substantial population increase cited previously in Table 1. It is speculated that most of this increase is from families of employees who work at the coal fields near Colstrip and not due to new businesses in Forsyth proper. Thus, it is felt personal property and some residential property are the major additions to the tax rolls, and not new business property. The former property is generally of lower taxable value and, hence, it appears that population has grown at greater rate than total taxable valuation, causing the lower per capita figure as shown in Table 2.

Also the relationship between the two percentage figures for Lodge Grass is not the same as the other entities. There has been a slight increase overall in the tax base during a period of substantial population decline (about 37 percent). At the same time, the taxable valuation per individual has expanded significantly; i.e., 62 percent. It is difficult to account for this situation, but one might speculate that coal employment has enabled the purchase of new property and a higher standard of living per individual than existed before. It should also be mentioned that even though the per capita gain has been substantial, the actual amount is still considerably smaller than the other listed entities.

The taxable valuation growth is the nucleus of the property tax picture. If the tax base grows faster than expenditure requirements, the mill levy will drop since each mill will generate an increasing amount of tax revenue. From the information presented in Chapter II, this appears to be the situation for Big Horn and Rosebud county governments.

However, the local governments are not free to levy taxes as they

see fit. Mill limitations for various fund categories are prescribed by statute and can be exceeded only under justified circumstances. Historically, these limitations have only been a problem for the municipalities. Although municipalities can levy taxes against individual fund categories, the majority prefer to use the All-Purpose Levy which has a maximum of 65 mills. In fact, over two-thirds of Montana's municipalities used this levy in fiscal 1978 and 40 percent of them levied the maximum allowed. Also for the other one-third of the municipalities which levied against special fund accounts instead of the all-purpose levy, 58 percent of them levied 65 mills or more in fiscal 1978.[4]

This discussion of maximum allowable mills is important in assessing the efforts of the municipalities to meet their public service costs. Table 3 reflects this effort for Hardin, Lodge Grass, and Forsyth over the eight most recent years. From this table, it is apparent that the

TABLE 3

MILL LEVIES FROM FY 1971 TO FY 1978

Municipality	1971	1972	1973	1974	1975	1976	1977	1978
Hardin	51.39	49.66	51.12	57.25	62.50	67.50	67.50	70.50
Lodge Grass	60.00	60.00	60.00	60.00	65.00	65.00	65.00	65.00
Forsyth	47.00	48.00	48.00	55.00	55.00	69.00	69.00	67.00

SOURCE: Collected from numerous issues of the "Montana Property Tax Mill Levies," Montana Taxpayers' Association, Helena, Montana. (See Appendix 3.)

[4]Figures were derived from data presented in the "Montana Property Taxation - 1978," Montana Taxpayers' Association, Helena, Montana, January 1978, pp. 13-16.

three municipalities have been levying the maximum allowable millage or more for the last three years.

It was stated initially that property tax has been the prime source of tax revenue for all of Montana's local public sectors. Also, property tax has in the past, been the major source of total revenue for Montana's local governments. However, the declining importance of property tax revenue for Big Horn and Rosebud counties is apparent from Table 4.

TABLE 4

PROPERTY TAX AS A PERCENTAGE OF TOTAL REVENUE

Entity	Rounded to Nearest Percent				
	1960	1965	1970	1975	1977
Big Horn County	63	62	70	46	28
Rosebud County	67	70	73	37	38
Hardin	35	59	58	26	16
Lodge Grass	16	46	44	27	3
Forsyth	45	35	32	25	6

SOURCE: Derived from County, City, and Town Annual Reports submitted each year to Montana's State Examiner, Fiscal Years 1960 - Fiscal Years 1977. (See Appendix 3.)

Table 4 also reflects that reliance upon property taxes is far greater for the two county governments than for the respective municipalities. It is also noteworthy to compare some of the results of both Table 3 and Table 4. All three municipalities are levying the maximum millage allowed by law, and still for fiscal 1977, this represents less than one-fifth of the total revenue collected for each municipality.

Before leaving this section on property tax, some remarks on school funding will be made. It is appropriate to include these remarks at this point, since school districts rely heavily on property tax to fund their activities. It should be mentioned that each county is divided into high school and elementary school districts. These districts for Big Horn and Rosebud counties are depicted in Figure 1.

The financing of school systems is a major expenditure item for Montana's taxpayers. The school budget is divided into a general fund which provides for the majority of the operation and maintenance costs, and numerous other special fund accounts. One of these latter funds includes the transportation of pupils which is financed by property tax from the county and school district, and appropriations from the State general fund. In addition, the county levies a tax on property to pay school teachers' employer contributions to Social Security and to their retirement program. The school district also levies a tax on property for building programs, debt service, insurance, tuition, etc.[5]

Although these other fund accounts can be significant in certain years, the general fund overall is by far the more substantial account. The general fund is derived in a rather complex fashion and this review will only touch upon some mechanics involved. Sources of funding normally include the state, county, and districts themselves. State funds are provided only to those districts that are unable to generate sufficient funds from their county and district sources. This funding concept is depicted in Figure 2.

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[5]Thompson, "Taxation and Revenue Systems," pp. 40-41.

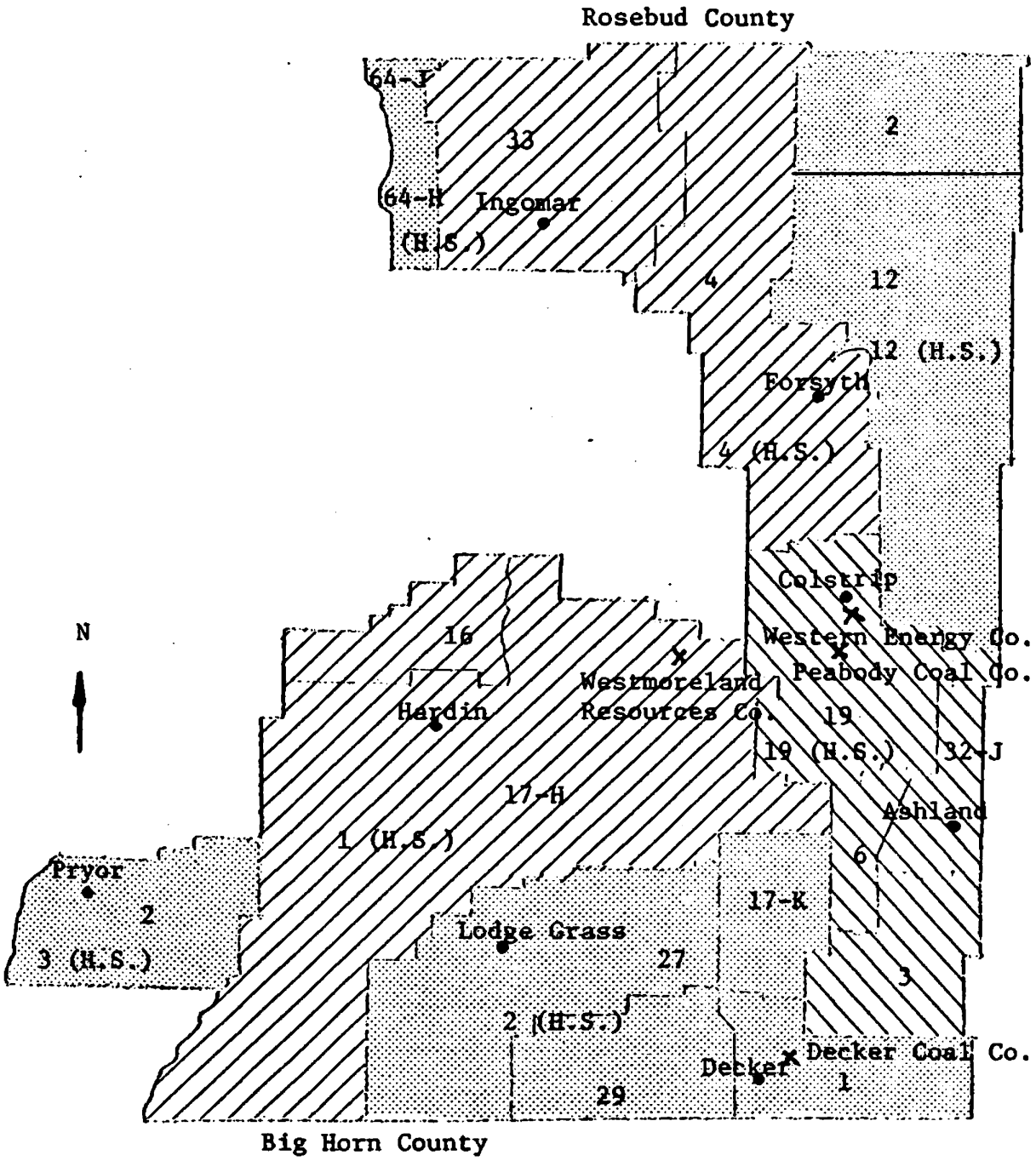

Fig. 1. School District Boundaries

SOURCE: Montana, Department of Financial Services, Office of the Superintendent of Public Instruction, Helena, Montana.

NOTE: Legend on following page. Shaded and Cross-Hatched Areas Represent High School District Boundaries.

LEGEND - Fig. 1.

- Municipalities & Communities x - Coal Mines

Rosebud County

District No.	District Name
2	Rock Springs
3	Birney
4	Forsyth
4 High School	Forsyth
6	Lame Deer
12	Rosebud
12 High School	Rosebud
19	Colstrip
19 High School	Colstrip
32-J	Ashland
33	Ingomar
64-J & 64-H High School	(Joint with Musselshell County. Schools located in Musselshell.)

Big Horn County

District No.	District Name
1	Squirrel Creek
2	Pryor
3 High School	Pryor
16	Community
17-H	Hardin-Crow Agency
1 High School	Hardin
17-K	Busby
27	Lodge Grass
2 High School	Lodge Grass
29	Wyola

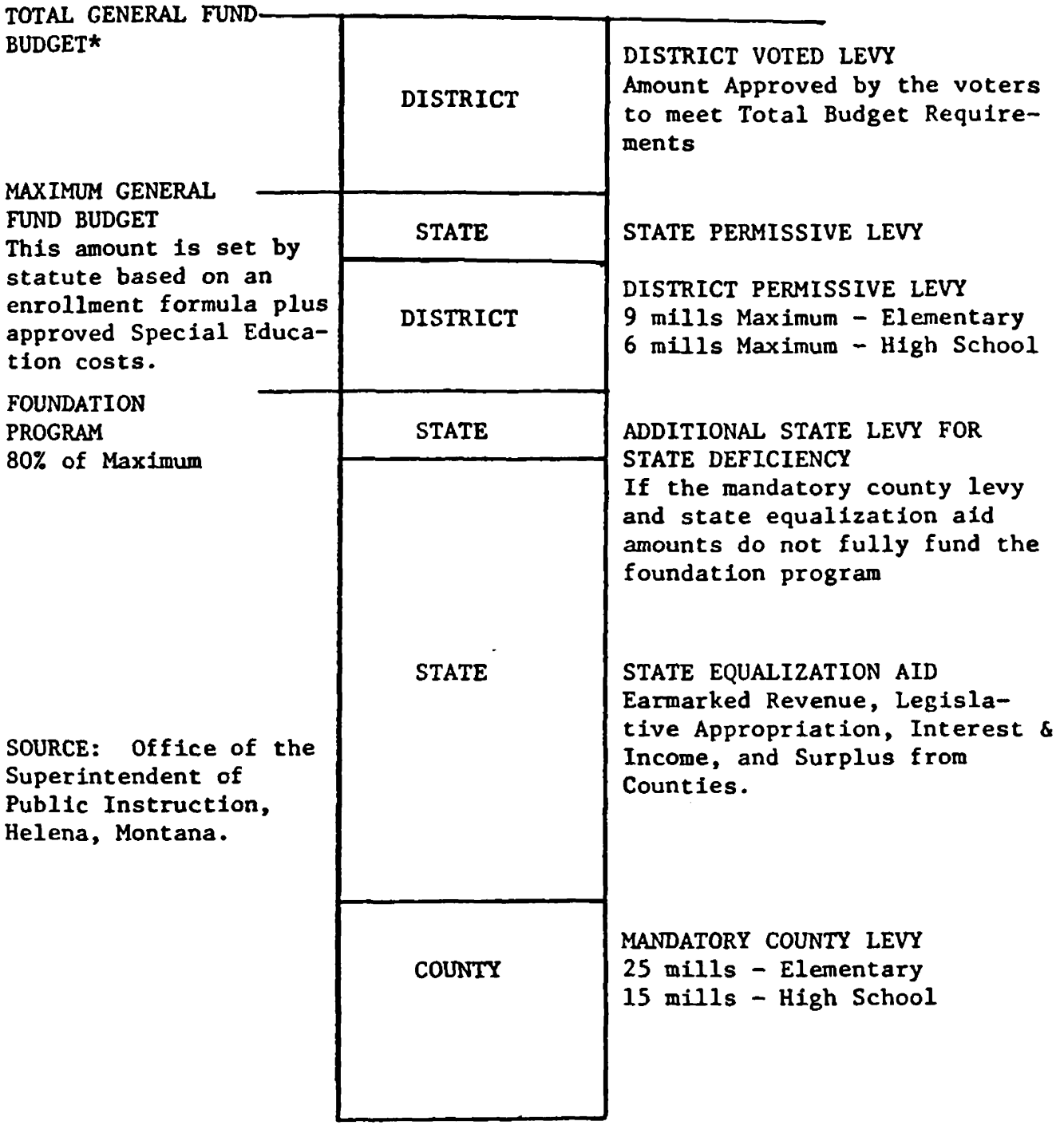

Fig. 2. Financing a School District General Fund Budget* in Montana

*The district's general fund budget provides for maintenance and operational costs. It accounts for the greatest majority of the total district costs. Not included in the General Fund are separate budgets for Retirement, Transportation, Debt Service, etc., as established by law.

The total general fund budget consists of the district voted levy and the maximum general fund budget which is further subdivided into permissive levies and the school foundation program. The maximum general fund budget is set for each district each year by Montana statutes, depending on enrollment data. Eighty percent of this budget constitutes the foundation program and is financed by the county and state. The county's contribution is mandated at 40 mills against the total county property taxable valuation, but if this contribution does not realize the total foundation program amount, the State will satisfy the deficiency. On the other hand, if the county's contribution exceeds the foundation program amount, the surplus reverts to the state equalization fund to be allocated to other counties where a deficiency exists. This latter situation has been the case for both Big Horn and Rosebud counties in recent years because of their large property tax bases. For instance, for school year 1977-78, Big Horn and Rosebud counties will contribute $125,268 and $680,010 respectively to the state high school equalization program, and $110,689 and $1,017,357 respectively to the state elementary school equalization program.[6] During this same period, only two other counties contributed to the state equalization program and both of these had large tax bases as a result of oil and gas production.

With only a few counties able to meet the foundation program level with a 40 mill levy, there is a real dependence upon state equalization funding. In addition to surplus contributions, state equalization funds are derived from other earmarked tax revenue and legizlative appropriations. Then if a deficiency still exists in foundation program funding,

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[6]Montana Taxpayers' Association, "Montana Property Taxation - 1978," pp. 19-21.

a uniform mill levy is set by the Department of Revenue and imposed on all statewide property. In other words, Big Horn and Rosebud counties are mandated additional property tax levies to support other county school deficiencies. This levy has been necessary for most years since the inception of the foundation program in 1949.[7]

The remaining 20 percent of the maximum general fund budget is supplied by the school district and the state permissive levy. The elementary districts must levy up to nine mills and the high school districts up to six mills before any state funds can be received. The district levies generate funds based on taxable valuation of property within their district boundaries. Unlike the foundation program, however, there are no funding surpluses created. Districts levy only an amount sufficient to reach 20 percent of the maximum general fund budget up to the maximum allowed millage, i.e., nine mills for an elementary district and six mills for a high school district. Once the districts have levied the maximum millage, the state permissive levy will fund any deficiencies up to the 20 percent maximum general fund budget level. But the state permissive levy is also a uniform statewide property tax. So once again the higher tax base counties such as Big Horn and Rosebud counties, contribute to school financing in other counties.

Beyond the maximum general fund budget ceiling, additional costs for operation and maintenance are supplied solely by the district levy and must be approved by a public vote. Statewide the requirement to use the voted levies has been increasing nearly every year.[8] From Tables 5 and 6, it is clear that with few exceptions, the increasing trend in voted

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[7]Ibid, p. 21.

[8]Ibid, p. 17.

TABLE 5

BIG HORN COUNTY VOTED SCHOOL LEVIES BY SCHOOL DISTRICT
(In Dollars)

	School Years			
Elementary District No.	1969-70	1974-75	1976-77	1977-78
1	-0-	2,400	5,500	6,500
2	14,467	25,000	27,526	30,000
16	-0-	-0-	5,750	9,000
17-H	63,645	205,611	316,000	394,475
17-K	-0-	-0-	-0-	-0-
27	24,180	93,963	114,322	159,475
29	8,859	35,239	47,848	47,361
High School District No.	1969-70	1974-75	1976-77	1977-78
1	44,478	97,667	110,143	181,357
2	27,114	81,481	141,969	191,000
3	N/A	30,000	49,610	35,000

SOURCE: Taken from school budgets which are submitted annually to the Department of Financial Services, Office of the Superintendent of Public Instruction, Helena, Montana. (See Appendix 3.)

NOTE: N/A - Not Available. High School District No. 3 was formed in 1974.

levies is occurring in Big Horn and Rosebud counties. In fact, the use of voted levies has increased at a rate far greater than the state average. For example, between school years 1969-70 and 1977-78, the State averaged a 289 percent increase in voted levies, while Big Horn County's increase for the same period was 477 percent and Rosebud County's increase was 637 percent. However, the year-to-year increase declined in Big Horn and Rosebud counties in the last school year, while the state average

expanded slightly.[9] Thus, the irony is that overall Big Horn and Rosebud counties have had to rely more on funds from voted levies than other counties at a time when they are reverting substantial tax dollars to help fund these other county school systems.

TABLE 6

ROSEBUD COUNTY VOTED SCHOOL LEVIES BY SCHOOL DISTRICT
(In Dollars)

	School Years			
Elementary District No.	1969-70	1974-75	1976-77	1977-78
2	-0-	-0-	-0-	-0-
3	-0-	8,188	816	2,300
4	10,800	45,230	72,223	107,913
6	55,334	109,000	215,663	181,061
12	5,970	22,000	14,999	29,696
19	11,975	136,778	135,176	252,313
32-J	12,000	17,492	6,626	15,263
33	26,975	26,186	93,610	70,000
High School District No.	1969-70	1974-75	1976-77	1977-78
4	10,800	37,625	79,039	109,788
12	10,768	29,000	20,000	26,464
19	11,706	123,154	192,527	357,392

SOURCE: Taken from school budgets which are submitted annually to the Department of Financial Services, Office of the Superintendent of Public Instruction, Helena, Montana. (See Appendix 3.)

[9]Percentage figures for Big Horn and Rosebud counties were derived from Tables 5 and 6. The state average percentages were derived from issues of the "Montana Property Taxation," Montana Taxpayers' Association, Helena, Montana.

It was mentioned earlier that location is the key factor in determining a taxing jurisdiction's taxable valuation. The location of the major coal mines and the coal-fired electrical generation plant are indicated in Figure 1 which outlined the school districts. Mineral production, mining equipment and facilities, and power plants have added, by far, the greatest amount of taxable property. Of course, new workers and their families add both real and personal property to the tax rolls, and new businesses as a consequence of new residents also add property for taxation purposes. These additions are relatively insignificant, however, when compared with the first property additions. Thus, those taxing entities which can claim the first additions, have a large potential source of new property tax revenue. These entities in Big Horn County include: the county government itself, High School Districts 1 and 2, and Elementary School Districts 17-H and 1. In Rosebud County the list of applicable jurisdictions includes: the county government, High School District 19 and Elementary School District 19.

Unfortunately, these jurisdictions with the greatest property gains are not the only ones which experience an impact on their public services. New residents associated with industrial development often locate in areas quite removed from their place of employment. For instance, since the mine sites are in relatively unsettled, isolated areas, new residents may locate near to existing municipalities for the availability of shopping, schools, community and cultural activities and other amenities. Hence, these established communities experience greater demand for public services which necessitate higher public expenditures. Yet, these areas will not receive the large potential for property taxes to offset these expenditures because the mining property is not located within their taxing jurisdiction. A more

detailed analysis demonstrating the effects of this taxation inequity will be presented in Chapter V. However, the potential candidates for this situation include Forsyth, several of the school districts adjacent to Colstrip High School and Elementary District 19, Hardin and, to a lesser extent, some of the school districts adjacent to Squirrel Creek Elementary School District 1. This latter school district contains the Decker Coal Company mines, but most of the population impact from these mines has been felt in Sheridan, Wyoming, which will not be considered in this study.

Net and Gross Proceeds Taxes

Net and Gross Proceeds Taxes are a form of property tax on extracted minerals. Prior to July 1, 1975, extracted coal was taxed under the Net Proceeds method. Montana's 44th Legislature changed this method to the Gross Proceeds basis because of the difficulty of ascertaining "net proceeds" and problems with its administration.[10] Both methods are in reality a procedure for assessing the value of the extracted coal. The net proceeds calculation subtracted from the annual gross value of coal production certain allowable deductions, such as operating expenses, depreciation, transportation expense for coal shipment, etc. This calculation formed the basis of the net proceeds assessment. The taxable valuation was then set at 100 percent of this assessed value.[11]

The gross proceeds calculation derived its assessed value from the contract sales price of the coal produced each year. "Contract sales

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[10] Krutilla, Fisher and Rice, "The Regional Economic and Fiscal Impacts: A Case Study," p. 71.

[11] Montana, Department of Revenue, "Report of the State Department of Revenue - For the Period July 1, 1974 to June 30, 1976," Helena, Montana, p. 87.

price is defined as the price of the coal extracted and prepared for shipment F.O.B. mine, excluding that amount charged by the seller to pay taxes on production."[12] Then the taxable value is determined by taking 45 percent of this assessed value for strip mines and 33.3 percent of this assessed value for underground mines.[13]

It should be noted that by either method, the assessed valuation is based on the prior year's production. Thus, it is possible to have well over a year's lag from the commencement of extraction until this property generates tax revenue.

Once the taxable valuation is arrived at, the tax payments are determined by using the applicable taxing jurisdiction's mill levies. This procedure and some of its ramifications have already been outlined in the previous section on Property Tax. However, it is enlightening to look at the significance of the taxable valuation from the coal Net and Gross Proceeds Taxes to Big Horn and Rosebud counties. The historical values are listed in Table 7 along with a percentage of the total taxable valuation.

From Table 7, it is apparent that the Net and Gross Proceeds Tax have added a substantial amount to each county's tax base for the last several years. In fact, this amount has been well over half in Big Horn County for the last three fiscal years consecutively. Rosebud County, on the other hand, is not quite so dependent upon this source for its property tax. This can be explained because coal extraction tonnage is less in Rosebud County than in Big Horn County, and because Rosebud County has received a substantial boost in its tax base from the

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[12] Ibid.

[13] Ibid.

TABLE 7

TAXABLE VALUATIONS DERIVED FROM NET AND GROSS PROCEEDS TAXES ON COAL EXTRACTION

	Big Horn County		Rosebud County	
Fiscal Year	Taxable Valuation	Percent of Total County Taxable Valuation	Taxable Valuation	Percent of Total County Taxable Valuation
1970	---	---	$ 24,292	Less than 1%
1971	---	---	544,517	4
1972	---	---	1,888,016	14
1973	---	---	5,094,920	28
1974	$ 495,114	3	4,739,983	24
1975	9,946,235	34	2,864,080	11
1976	21,238,986	52	2,259,429	5
1977	28,847,147	60	11,752,699	17
1978	33,744,583	62	18,176,703	21

SOURCE: Derived from "Montana Property Tax Mill Levies," Montana Taxpayers' Association, Helena, Montana; "Report of the State Department of Revenue," Department of Revenue, Helena, Montana; Biennial Reports of the Montana State Board of Equalization, Helena, Montana; and unpublished data from the Department of Revenue, Helena, Montana

coal-fired electrical generation plants at Colstrip and oil and gas net proceeds; whereas, Big Horn County has acquired little industry other than coal mining. This latter situation can be seen by comparing the growth in the tax base due to the Net and Gross Proceeds Tax to the percentage of the total valuation. For instance, in Big Horn County the addition to the taxable valuation from this tax between fiscal 1975 and fiscal 1978 more than tripled and increased its allotment of the total valuation by 28 percent. In Rosebud County for the same period the addition from the tax was more than sixfold, and yet its portion of the

total grew by only 10 percent. In any case, it can be concluded that Net and Gross Proceeds Tax from coal mining has been significant for the generation of property tax in both counties. However, it should be kept in mind that it was determined from the previous section that property has had a declining importance as a source of revenue for these two counties in the last few years.

Coal Producer's License and Severance Tax

All firms engaged in extracting coal in Montana must pay a Coal Producer's License and Severance Tax. This tax is commonly referred to as the "coal severance tax." It is based on production tonnage, heat content (BTU's per pound), and the method of mining, i.e., surface (strip) mining or underground mining. However, in Montana only strip mining exists.

The original legislation imposed a flat rate per ton for the various levels of BTU content. However, the 1975 Legislature incorporated an option to tax at a percentage of the value of the coal production instead of the flat rate. This value is computed on the legal contract sales price similar to the Gross Proceeds Tax basis. The intent of the legislation was to allow the coal severance tax to keep pace with the price of coal. The legislation further stated that the tax formula which yields the greater amount of tax would be utilized at each BTU content level. Since the inception of this new legislation, the percentage of value has by far yielded the greater amounts. Table 8 reflects the current coal severance tax schedule.

Prior to passage of new legislation in 1975, the coal severance tax was collected by the State Department of Revenue and distributed solely to the State General Fund. With passage of new legislation, the revenue was distributed to several earmarked funds in addition to the General Fund.

TABLE 8

COAL SEVERANCE TAX SCHEDULE

BTU's Per Pound	Surface Mining		Underground Mining	
	Cents per Ton	Percent of Value	Cents per Ton	Percent of Value
	-the greater of-		-the greater of-	
Under 7,000	12	20	5	3
7,000 - 8,000	22	30	8	4
8,000 - 9,000	34	30	10	4
Over 9,000	40	30	12	4

SOURCE: Montana, Revised Codes, vol. 5, pt. 2, 1977 Cumulative Supplement, Paragraph 83-1314, p. 86.

NOTE: The first 20,000 tons of production per calendar year is exempt from taxation.

This distribution allotment schedule was further modified by the 1977 Legislature. The schedule for the 1975 legislation distribution is presented in Table 9 and the schedule as a result of the 1977 amendment is given in Table 10.

From Tables 9 and 10, it can be seen that a significant portion of the collected coal severance tax will directly or indirectly affect the coal producing counties. An estimate of these effects will be discussed below. Coal severance tax paid by coal companies in Big Horn and Rosebud counties since the 1975 legislation are indicated in Table 11.

Using Table 11 and portions of Tables 9 and 10, an estimate of the coal severance tax benefits for Big Horn and Rosebud counties can be made. The tax percentage allocated to the "Coal producing counties" will be considered as a direct benefit since it is given to the county for

TABLE 9

DISTRIBUTION OF THE PROCEEDS FROM COAL SEVERANCE TAX
(1975 Legislature)

Disposition	Fiscal Year 1976-1979	Fiscal Year 1980 and Thereafter
	Percent	Percent
Total severance funds	100.0	100.0
State general fund*	40.0	40.0
Local impact and education fund	27.5	35.0
School equalization fund of the state	10.0	10.0
Coal area highway development program	10.0	0.0
Coal producing counties	4.0 3 cents/ton	3.5 3 cents/ton
Renewal resource development bond account	2.5	2.5
Alternative energy resource development	2.5	4.0
Park fund	2.5	5.0
County planning account	1.0	0.0

SOURCE: Derived from the Montana, Revised Codes, vol. 5, pt. 2, 1975 Cumulative Pocket Supplement, Paragraph 84-1319, pp. 77-78.

*The 40.0 percent is an estimate assuming disposition for "coal producing counties" will be based on the percentage instead of the per ton rate.

expenditure at its discretion. The tax percentages allocated to the "Local impact and education fund" and the "Coal area highway development program" will be considered as indirect benefits since they are subject to the approval and discretion of authorities in state government. Additionally, the illustration below indicates allocation of indirect benefits to each county based upon extracted coal levels; however, the

award of these benefits is based upon need and other criteria, and may not necessarily be received by the county from which it was derived as the illustration suggests. Also, although some of the other disposition allotments may provide some eventual benefit to Big Horn and Rosebud counties, this benefit is shared by other non-coal connected counties as well, and would be difficult to proportion to any one county. The results of the direct and indirect coal severance tax benefits are estimated in Table 12.

TABLE 10

DISTRIBUTION OF THE PROCEEDS FROM COAL SEVERANCE TAX
(1977 Legislature)

Disposition	Fiscal Year 1976-1979 Percent	Fiscal Year 1980 and Thereafter Percent
Total Severance Funds	100.000	100.000
Coal Trust Fund	25.000	50.000
State General Fund	30.000	19.500
Local Impact and Education Fund	19.875	18.750
School Equalization Fund of the State	7.500	5.000
Coal Area Highway Development Program	9.750	0.000
Coal Producing Counties	1.500	0.000
Renewal Resource Development Bond Account	1.875	1.250
Alternative Energy Resource Development	1.875	2.500
Park Fund	1.875	2.500
County Planning Account	0.750	0.500

SOURCE: Layton S. Thompson, "The Taxation and Revenue Systems of State and Local Government in Montana as of 1977," Department of Agricultural Economics and Economics, Montana State University, Bozeman, Montana, June 1977, p. 29.

TABLE 11

COAL SEVERANCE TAX PAYMENTS BY COUNTY SINCE JULY 1975

County	Fiscal 1976	Fiscal 1977	Fiscal 1978*
Big Horn County	$14,394,049	$23,469,428	$17,563,306
Rosebud County	7,545,201	12,139,094	9,460,884

SOURCE: Taken from unpublished data from the Department of Revenue, Helena, Montana.

*This fiscal year includes payments for only three quarters of the year.

TABLE 12

DIRECT AND INDIRECT TAX PROCEEDS FROM COAL SEVERANCE TAX ALLOCATED TO BIG HORN AND ROSEBUD COUNTIES

Big Horn County			
Type	Fiscal 1976	Fiscal 1977	Fiscal 1978**
Direct	$ 575,762	$ 938,781	$ 263,450
Indirect*	3,958,364	6,454,120	3,933,781
TOTAL	$4,534,126	$7,392,901	$4,197,231
Rosebud County			
Direct	$ 301,808	$ 485,564	$ 141,913
Indirect*	2,074,930	3,338,251	2,119,023
TOTAL	$2,376,738	$3,823,815	$2,260,936

SOURCE: Derived from Tables 9, 10, and 11.

*Only seven-elevenths of the Local Impact and Education Fund has been included. It will be shown in Chapter IV that only this portion is available for local impact while the remainder goes into an education trust fund which is allocated for future educational needs.

**The fourth quarter proceeds for fiscal 1978 from the coal severance tax are not available at this time.

Thus, from Table 12 it is evident that the coal severance tax is a significant source of revenue for Big Horn and Rosebud counties. It should be noted that under the present laws, much of this revenue will be eliminated after fiscal 1979. In fact examining the present percentage rates for the described direct and indirect tax proceeds, these rates will be reduced by 40 percent in fiscal 1980.

In recent months the coal severance tax has been the subject of considerable controversy. Montana's coal severance tax rate is suggested to be the highest in the nation and is certainly higher than those of its neighboring coal-producing states.[14] Additionally, most of Montana's coal production is exported to other states. (About 90 percent of Montana's 1976 coal production was shipped out-of-state and this percentage was maintained for the first six months of 1977.)[15] Consequently, the coal severance tax is passed on to out-of-state coal customers in the form of higher prices.

Several of the coal companies' utility customers have filed a lawsuit in protest of paying these passed-through coal taxes. The outcome and ramifications of such a lawsuit are uncertain. Some speculation has been that the suit could tie up the utilization of the severance taxes for as much as five years until the litigation can be resolved. However, the Governor's Office recently announced that it intends to utilize the tax monies during the litigation proceedings. The outcome of the lawsuit

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[14]U.S., Department of Agriculture, Impact on Revenues of State and Local Governments, Stinson and Voelker, January 1978, p. 8.

[15]Itami, "Montana Historical Energy Statistics," p. 26.

could have a substantial impact on revenue for both the State and the coal-producing counties.[16]

Corporation License Tax

All foreign and domestic corporations operating in Montana are subject to a corporation license tax of 6.75 percent of all net income for the taxable period or $50.00, whichever is greater.[17] The license fee is based on the net income derived from or attributable to Montana sources. Hence, the coal mining corporations and electrical generation companies in Big Horn and Rosebud counties are subject to this tax. The proceeds from this tax are collected by the State Department of Revenue. Distribution of the tax collections is as follows: 64 percent to the State General Fund, 25 percent to the School Foundation Program, and 11 percent to the Sinking Fund Bond Retirement Fund.[18]

Accordingly, only the School Foundation Program would allow subsequent transfer of collected revenue to local governments. From previous analysis, it was shown that Big Horn and Rosebud counties have not received funds from the School Foundation Program in recent years, but instead have reverted substantial local property taxes to the program. Actual corporation license taxes paid by the coal-related corporations for the two counties cannot be reported because of the confidentiality of the data.

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[16]The discussion of the coal severance tax controversy has been derived from numerous newspaper articles in Independent Record, Helena, Montana.

[17]Montana, Department of Revenue, "Report of State Department of Revenue, July 1974-June 1976."

[18]Ibid.

Electrical Energy Producer's Tax

The electrical energy producer's tax is imposed upon all businesses engaged in the generation of electrical energy. The current tax rate is $.0002 per kilowatt-hour of electricity generated each year.[19] The proceeds are collected by the State Department of Revenue and allocated to the State General Fund. However, 0.25 percent of the revenue collected is set aside for the provisions of the "Montana Utility Act of 1973" which attempts to insure major utilities are located where they will cause the least adverse impact on the surrounding area.[20]

The electrical energy producer's tax is relevant to a coal production study because 31 percent of Montana's electrical generating capacity is fueled by coal.[21] Over 76 percent of the coal-fired electrical capacity is provided by the Colstrip units in Rosebud County. Also, if the two additional proposed units for Colstrip are approved, coal-fired electrical generation will increase to over half of all of Montana's generation capacity.[22]

The information is not available to apportion the electrical energy producer's tax attributable to the Colstrip units. However, for purposes of a rough estimate, the percentage of the total capacity can be applied to the total tax paid. For instance, in fiscal 1976 the total

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[19]Ibid, p. 119.

[20]Montana, Revised Codes, vol. 4, pt. 2, 1975 Cumulative Pocket Supplement, Paragraph 70-805, pp. 13-17.

[21]Itami, "Montana Historical Energy Statistics," p. 8.

[22]Ibid.

electrical energy producer's tax paid was $1,065,500. Using the procedure suggested above, $249,625 would be tax attributable to Colstrip. It should be clearly understood that this latter figure is illustrative only since the actual tax is based on generation and not capacity, which was used in this illustration.

Resource Indemnity Trust Tax

Effective July 1, 1974, Montana established the resource indemnity trust tax. The tax is levied on all businesses engaged in the mining, extracting, or producing of a mineral from the surface or subsurface of the state. The annual tax rate is $25 plus 0.5 percent of the gross value of production in excess of $5,000. Revenue from this tax is placed in an environmental reclamation Trust and Legacy Fund, which is invested by the Montana Board of Investments. When the fund accumulates $10 million, interest from the investments may be used to rectify environmental damage caused by mining. When the fund exceeds $100 million, both the interest and subsequent fund additions can be used for rectifying environmental damage.[23]

According to an accountant with the Board of Investments, the total amount in the Resource Indemnity Trust Fund as of February 28, 1978, is $8,642,000. Since the FY 1977 contribution to this fund was $2,211,953, it is likely that the $10 million level will be reached by early 1979 after which fund earnings can be used for reclamation purposes. The coal industry accounted for about 22 percent of the $2,211,953 contribution in FY 1977. This is a substantial increase from the five percent

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[23]U.S., Department of Agriculture, Economic Research Service, State Taxation of Mineral Deposits and Production, by Thomas F. Stinson, (Washington, D.C.: Government Printing Office, 1977), p. 31.

share of the total in FY 1974.[24] The coal mines in Big Horn and Rosebud counties are responsible for the majority of the coal industry's share. For instance, these two counties accounted for about 99 percent of all coal production in Montana for 1977.[25]

Royalty Payments for State and Federal Lands Leases

Although royalty payments from land leases are not technically taxes, they are related to coal production and are a source of revenue for state government. Coal that is mined on land leased from the State or Federal Government is subject to royalty payments. Each level of government has its own method of determining the payment amount. These will be discussed below.

Companies extracting coal from state-owned land must enter a lease agreement with the State Board of Land Commissioners (board). A requirement of the lease agreement is to remit royalty payments in accord with the amount of coal extracted from the state-owned land. Montana statutes impose minimum payment requirements, but allow the board to impose higher rates at its determination. Some of the early legislation set the minimum at 12.5 cents per ton of coal mined. The 1975 Legislature enacted a rental on the land set at a minimum of $2 per acre and a royalty on the extracted coal set at a minimum of 10 percent of the f.o.b. mine price of a ton prepared for shipment.[26]

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[24]These figures are derived from unpublished data available at the Department of Revenue, Helena, Montana.

[25]Itami, "Montana Historical Energy Statistics," p. 22.

[26]Montana, Revised Codes, vol. 5, pt. 1, and Supplements, Section 81-501 through 81-511.

The actual imposed rates have varied slightly from year to year. Collected royalties are set up in a trust fund. Earnings from this trust are given to the Office of the Superintendent of Public Instruction for school funding programs.[27]

For the study area of this paper, only the Decker Coal Company in Big Horn County has any such leases with the state. Table 13 indicates the amount of the royalty payments, and the coal tonnage involved for the Decker Coal Company. The state-leased coal production in 1977 represented 57 percent of the Decker Coal Company's production.[28]

TABLE 13

COAL TONNAGE AND ROYALTY PAYMENTS FOR THE DECKER COAL COMPANY FROM STATE-LEASED LAND

Year	Coal Tonnage	Royalty Payments
1970	74,856	$ 11,078
1971	---	---
1972	184,002	24,215
1973	2,770,934	475,014
1974	4,783,894	833,831
1975	3,721,327	651,675
1976	4,600,413	800,486
1977	5,972,722	1,041,977
1978*	539,605	94,431

SOURCE: Taken from the official mineral leasing records at the Department of State Lands, Helena, MT.

*Includes figures only for January 1978.

[27]Based on a conversation during March 1978, with the mineral leasing clerk at the Department of State Lands, Helena, Montana.

[28]Derived from the mineral lease records at the Department of State Lands, Helena, Montana and Rick Itami's production figures on p. 22.

The federal Mineral Leasing Act of 1920 and its amendment, Coal Leasing Amendment Act of 1975, provide revenues from coal extracted on federally-owned land. It has been estimated that in 1976, one-quarter of the coal mined in Montana came from land under federal-lease.[29] The original legislation stated that a royalty of five percent of the value of the coal would be payable to the federal government, 37.5 percent of which is returnable to the state where the coal is mined. The amendment of this legislation, effective July 1, 1976, changed these percentages to 12.5 percent of the value of the coal payable to the federal government, 50 percent of which remits to the mining state. Exact data is not available to report the state receipts from these royalty payments. However, one author has estimated the state share of federal royalties from Big Horn and Rosebud counties to be as follows:[30] 1975 - $323,000; 1976 - $516,000; and 1977 - $619,000.

Summary

In this chapter we have reviewed the major direct taxation consequences associated with coal production. Seven different revenue sources as a result of coal development were defined and reviewed. They included: Property Tax, Net and Gross Proceeds Tax, Coal Producer's License and Severance Tax, Corporation License Tax, Electrical Energy Producer's Tax, Resource Indemnity Trust Tax, and Royalty Payments for State and Federal Lands Leases.

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[29]Krutilla, Fisher, and Rice, "The Regional Economic and Fiscal Impacts: A Case Study," p. 75.

[30]Ibid, p. 105.

Each one of these revenue sources was outlined by examining the mechanics of their determination, the intent and disposition of the collections, the historical significance of the tax in terms of dollar amounts, and some of the controversies surrounding them. Within Big Horn and Rosebud counties, coal activity has had the greatest positive effect on property taxes for the county governments and school districts whose boundaries enclose the coal facilities. The municipalities in these counties on the contrary, have not had the benefit of the major taxable valuation increases. Consequently, although they are taxing at the maximum permitted rate, a greater dependence on other revenue sources has been necessary. For instance, for fiscal 1977 property taxes represented less than one-fifth of the total revenue for each of the individual municipalities.

Local jurisdictions also use property taxation to finance their school systems. Thus, a concise description of the school funding mechanism was included in the property tax section. It was shown that because of statutory requirements considerable property taxes collected in Big Horn and Rosebud counties are allocated to school systems in other Montana counties; and, in fact, schools in Big Horn and Rosebud counties currently receive no direct aid under the state equalization program. The irony of this situation is that while Big Horn and Rosebud counties are helping to fund other county school systems, their own requirements which must be satisfied by voted levies, have grown faster than those of the rest of the state.

The Net and Gross Proceeds Tax was shown to be major addition to the county taxable valuations. This was particularly the case in Big

Horn County, where this addition accounted for 62 percent of the total tax base in fiscal 1978.

The Coal Producer's License and Severance Tax (coal severance tax) received considerable examination. It has been a major source of revenue for the State, and it was demonstrated that it provides substantial direct and indirect benefits to the counties of coal origination. A dollar estimate of these benefits was given, but no attempt was made to show its significance to total revenue collected because of constraints in assuring that all of the available indirect benefits did indeed reach the county treasuries. A possible entanglement of the use of this tax due to litigation by coal company customers was also mentioned.

The last four revenue sources were presented with less detail. Although it can be seen that they produce substantial revenue, most of it is collected at the state level for benefit statewide. Therefore, the significance of these collections to Big Horn and Rosebud counties cannot be delineated.

This chapter has confirmed that coal production and coal-related activity is heavily taxed and generates large sums of revenue for the public sector. The analysis of coal-related revenue will have greater significance when some comparisons are made with the expenditures associated with coal development at the local level in Chapter V. Most of the coal-related revenue is used to finance state and county government activities. The municipalities with few exceptions have financially benefited from coal activity only through the increased real and personal property of its new residents; but, it was pointed out that on a per capita basis, this increase has generally been below the state average. The exceptions have been in the form of intergovernmental

transfers and grants from programs receiving much of their funding from the coal-related revenue sources. One such grant program is associated with the Montana Coal Board and is the subject of the next chapter.

CHAPTER IV

MONTANA'S COAL BOARD AND RELATED GRANTS

Introduction

Montana's 1975 Legislature created the "Coal Board" to assist local governmental units which have been required to expand the provision of public services as a direct consequence of coal development and to administer the coal severance tax funds allocated to the Local Impact and Education Trust Fund category. In this chapter we briefly review some of the governing statutes associated with the Coal Board. This includes the authority and purpose of the Board, criteria for determining eligibility for grant assistance, and some of the technical requirements in the management of the fund.

One of the major responsibilities of the Coal Board is to award grants to local governments who satisfy certain application criteria. These grant awards total $14,954,097.91 as of January 24, 1978.[1] A list of the recipients and their share of this total is presented in Table 14. Based on the allocation of individual Coal Board grants to specific units of government within Big Horn and Rosebud counties, an analysis of the significance of these grants as a revenue source is developed. The illustration of this significance assumes that the same expenditure level would have resulted if the Coal Board grants had not been approved.

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[1]Taken from an unpublished list compiled by the Coal Board Administrator, Department of Community Affairs, Helena, Montana, undated.

TABLE 14

COAL BOARD GRANTS

Grant No.	Governmental Unit	Amount
	Rosebud County Funded Projects	
0002/0003	Colstrip Elementary High School	$ 100,000.00
0002	Colstrip Elementary	449,921.58
0003	Colstrip High School	317,185.00
0004	Ashland Elementary	800,000.00
0005	Rosebud School District	465,000.00
0006	Rosebud County Planning	32,000.00
0007	Forsyth Elementary School	2,500,000.00
0008	Forsyth High School	27,000.00
0009	Forsyth Water Treatment	615,000.00
0010	Forsyth Wastewater Pumping Station	150,000.00
0012	Forsyth Sewage Collection Treatment & Disposal	25,000.00
0014	Colstrip Sewage Treatment	538,000.00
0015	Ashland Water & Sewer	71,080.00
0016	Rosebud County Jail	100,000.00
0022	16th Judicial District	29,000.00
0027	Forsyth Capital Equipment	154,682.53
0037	Colstrip Street Cleaner	83,000.00
0038	Colstrip Water Treatment System	656,600.00
0057	Forsyth Municipal Water	87,000.00
0058	Forsyth Capital Equipment #2	58,500.00
0059	Colstrip Elementary School Equipment	38,544.70
0060	Rosebud County Water & Sewer District	51,000.00
0062	Ashland Volunteer Fire Department	45,000.00
0064	Forsyth Solid Waste System Improvements	145,000.00
	TOTAL	$ 7,538,513.81
	Big Horn County Funded Projects	
0017	Hardin Sewer Lagoon	$ 231,135.00
0018	Hardin Capital Equipment	128,154.76
0019	Lodge Grass Capital Equipment	125,250.00
0024	Lodge Grass Water Line	171,872.28
0028	Hardin Elementary School	2,041,648.00
0029	Hardin High School	1,168,000.00
0046	Hardin Water System Improvements	260,900.00
0047	Hardin Sewer Trunk Main	416,978.55
0063	Lodge Grass Capital Equipment	60,619.95
0069	Big Horn County Courthouse	416,000.00
	TOTAL	$ 5,020,558.54

TABLE 14--Continued

Grant No.	Governmental Unit	Amount
	Treasure County Funded Projects	
0020	Hysham Water Distribution System	$ 388,440.00
0030	Treasure County	7,695.00
0055	Hysham Sewer System	56,500.00
0061	Treasure County Patrol Car	7,768.00
	TOTAL	$ 460,403.00
	McCone County Funded Projects	
0043	McCone County Planning	$ 42,500.00
	Dawson County Funded Projects	
0042	Dawson County Census	$ 11,500.00
	Custer County Funded Projects	
0033	Miles Community College	$ 1,529,663.00
	Big Horn, Rosebud and Treasure County Funded Projects	
0068	Tri-County Solid Waste Disposal	$ 289,859.56
	Multi-County Funded Projects	
0031	Sagebrush Library Federation	$ 61,100.00
	Total of all Grant Awards	$14,954,097.91

SOURCE: Obtained from the Coal Board Administrator, Department of Community Affairs, Helena, Montana, January 24, 1978.

Governing Statutes

It was shown in Chapter III that a significant percentage of the coal producer's severance tax is allocated to the Local Impact and Education Trust Fund. (These percentages of the total are 27.5 percent from

July 1, 1975 through June 30, 1976; 19.875 percent from July 1, 1976 through December 31, 1979; and 18.75 percent thereafter.)[2] The intent of the local impact portion of this fund is to aid units of local government in providing public services which they are unable to adequately provide as a direct result of coal development. Units of local government used in this context are defined as counties, incorporated cities and towns, school districts, and special improvement districts.[3]

The 1975 Montana Legislature created the Coal Board primarily to administer this local impact fund portion; however, the Board does have some administrative responsibility for the education trust fund portion. But the trust fund portion is an inviolate fund, set aside for future educational needs, and all monies are automatically invested by the Montana Board of Investments. The local impact fund portion is similarly invested, but the Coal Board has authority to remove funds at its discretion for granting assistance to coal-impacted governmental units. Interest earned from both funds is earmarked for educational funding.[4]

The Coal Board has seven members appointed by the Governor, two of which must maintain residence in the impact areas and two of which must have expertise in education. These members meet periodically to consider applications for grants from the aforementioned fund. These grants cannot exceed seven-elevenths of the total local impact and

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[2]See the section on Coal Producer's License and Severance Tax in Chapter III.

[3]Abstracted from an undated general information letter entitled "Coal Board, Department of Community Affairs, and the Local Impact Assistance Grant Program," p. 1.

[4]Ibid, p. 3.

education trust fund in any one year.[5] This amount of the fund has previously been labeled the "local impact fund portion." In addition to the coal-impacted units of government which were defined earlier, state agencies that assist these local governmental units are also eligible for grant awards as long as each state agency's grant award is less than five percent of the total available monies. Awards can also be made for projects that extend up to 10 years in the future based on reasonable anticipated grant revenue.[6] For instance, it has been stated that grant awards as of January 24, 1977, totalled almost $15 million, and yet receipts through the same period equal only slightly more than $14 million.[7]

Grants to eligible local government units are awarded on the basis of "need, degree of severity of impact from the coal development, availability of funds, and degree of local effort in meeting these needs" (i.e., consideration of local bond issues and millage levels),[8] according to governing statutes. The Coal Board has added two additional criteria; population changes and a comparison of like counties, cities, towns or

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[5]After June 30, 1979, this fraction will change to seven-fifteenths. These fractions translate the percentage of the total coal producer's severance tax for local impact to 17.5 percent from July 1, 1975, through June 30, 1976, to 12.648 percent from July 1, 1976 through June 30, 1979, to 9.275 percent from July 1, 1979 through December 31, 1979, and to 8.75 percent thereafter.

[6]Montana, Revised Codes, vol. 3, pt. 2, 1977 Cumulative Supplement, Sections 50-1805 through 50-1810, pp. 438-441.

[7]Taken from an unpublished Coal Board Financial Statement prepared by the Department of Community Affairs.

[8]Montana, Revised Codes, vol. 3, pt. 2, 1977 Cumulative Supplement, Section 50-1806, p. 439.

school districts.[9] In addition, those governmental units which have experienced or expect to experience an increase in estimated population of at least 10 percent during any three years since 1972 as a direct consequence of coal activity, will receive at least 50 percent of all the Coal Board grants awarded each year. The governmental units meeting this criterion will be designated by the Department of Community Affairs each year.[10] Also, the passage of appropriation House Bill 145 during the 1977 session added the following requirement for grant awards: "A grant may be made only upon certification to the Coal Board by the Reclamation Division of the Department of State Lands that significant development will affect the area in which the grant is to be spent.[11] The government units and other areas that have been certified under this criteria are listed in Table 15.

Grant Awards

It has already been mentioned that since its inception, the Coal Board has awarded grants totalling $14,954,097.91. Table 14 indicates the grant awards by county location. This list shows that approximately 50 percent of the total grants were awarded to entities solely within Rosebud County and 36 percent strictly within Big Horn County. If grant Numbers 0068 and 0031, which are shared by other counties along with Big Horn and Rosebud counties, are added to the above percentages, about 89

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[9]"Coal Board, Department of Community Affairs, Local Impact Grant Program," p. 5.

[10]Montana, Revised Codes, vol. 3, p5. 2, 1977 Cumulative Supplement, Section 50-1807, pp. 439-440.

[11]Montana, Laws of Montana, vol. 11, Forty-fifth Legislature, 1977, p. 1990.

percent of the Coal Board grants that have been approved will benefit one or the other of these two counties.

TABLE 15

AREAS CERTIFIED BY THE DEPARTMENT OF STATE LANDS

FOR COAL BOARD GRANT PURPOSES

Counties	Cities & Towns	School Districts
Big Horn Rosebud Treasure	Forsyth Hardin Hysham Laurel Lodge Grass	Ashland Elementary Colstrip Elementary Colstrip High School Forsyth Elementary Rosebud Elementary Hardin Elementary Hardin High School Laurel, #7, #7-70

Special Districts or Rural Special Improvement Districts	Unincorporated Towns
Portion of Custer County Water and Sewer District Colstrip Sewage Treatment Improvement Rosebud County Water and Sewer District	Ashland Colstrip

SOURCE: Obtained from a list maintained by the Coal Board, Department of Community Affairs, Helena, Montana, January 20, 1978.

Within these two counties, school districts have received, by far, the majority of the grant dollars. This fact is reflected in Table 16, along with the apportionment of awards for other governmental units.

From Table 16, it is evident that after school districts, certain municipalities and some rural special improvement district locations have received the greatest share of the Coal Board grants. Grants to the counties for county purposes generally represent a small percentage of the grant award totals.

TABLE 16

APPORTIONMENT OF COAL BOARD GRANTS WITHIN

BIG HORN AND ROSEBUD COUNTIES

Big Horn County		
Governmental Unit	Dollar Amount	Percent of Total
County (For county purposes)	$ 416,000	8.3
School Districts (Collectively)	3,209,648	63.9
Hardin	1,037,169	20.7
Lodge Grass	357,742	7.1
All Units	$5,020,559	100.0

Rosebud County		
Governmental Unit	Dollar Amount	Percent of Total
County (For county purposes)	$ 161,000	2.1
School Districts (Collectively)	4,697,653	62.3
Forsyth	1,235,183	16.4
Rural Special Improvement Districts:		
Colstrip (Collectively)	1,277,600	17.0
Ashland (Collectively)	116,080	1.5
Rosebud County Water & Sewer	51,000	.7
All Units	$7,538,514	100.0

SOURCE: Derived from Table 15.

In order to attach significance to the grants as a source of revenue for any given year, it is necessary to look at the dates for which actual monies were paid; and these dates do not necessarily coincide with the grant award dates. As an example, for the approximate $7.5 million granted to entities in Rosebud County, only about 50 percent had been received in cash as of April 5, 1978. Similarly, for the $5.0 million in Big Horn County, about 75 percent had been expended.[12]

In order to attach significance to these Coal Board grants as a revenue source for local governments, the actual amounts received will be compared to the total revenue for a particular governmental unit. But the most current governmental financial records of local governments are for FY 1977. Thus, the actual amounts received from the Coal Board grants will be considered only through the end of FY 1977. The amount of grant monies received by Rosebud County through FY 1977 is $1,835,236, or 24 percent of its total awards. The amount in Big Horn County is $823,431, or 16 percent of its total grants. Consequently, it should be kept in mind that the comparisons given below will not show the entire significance of the grants because most of these funds will be received in subsequent fiscal years.[13]

The significance of Coal Board grants in FY 1977 can be illustrated for recipient entities. These calculations are presented in Table 17, which includes only those governmental units that actually received monies in FY 1977 and for which financial reporting data is available for comparison.

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[12]Derived from detailed financial records maintained by the Coal Board Administrator, Department of Community Affairs, Helena, Montana.

[13]Ibid.

TABLE 17

PERCENTAGES OF TOTAL REVENUE IN FY 1977

DERIVED FROM COAL BOARD MONIES

Rosebud County

Governmental Unit	Percent of Total Revenue
Rosebud County (County Purposes)	1.2
Forsyth	43.2
Ashland Elementary School District	20.2
Rosebud Elementary School District	64.8
Forsyth Elementary School District	37.2
Forsyth High School District	5.5
Big Horn County	
Hardin	13.9
Lodge Grass	73.1
Hardin Elementary School District	7.0
Hardin High School District	7.2

SOURCE: Derived from detailed financial records on Coal Board grants maintained by the Coal Board Administrator, Department of Community Affairs, Helena, Montana; School Trustees Reports submitted annually to the Office of the Superintendent of Public Instruction, Helena, Montana; and Annual Reports submitted to the State Examiner, Local Government Services Division, Department of Community Affairs, Helena, Montana.

The results of Table 17 indicate that Coal Board grant funds have been a significant revenue source for most of the recipients in FY 1977. The exceptions are Rosebud County (for county purposes) and some of the school districts. If it is assumed that the revenues would have been required to satisfy needed services even if the Coal Board funds had not

been received, many of the entities would have been hard pressed to raise the funds from normal property tax sources. These entities include: Forsyth, Hardin, Lodge Grass, and Ashland, Rosebud, and Forsyth Elementary School Districts. In the case of the three municipalities, it has already been explained that for FY 1977, the statutory millage limit was levied, and therefore additional property taxes could not be raised. In the case of the school districts, those listed have not received the benefit of the coal-related taxable valuation expansion outlined in Chapter III, and thus substantial voted mill levies would have been needed to meet the revenue requirements.

It should be pointed out that this analysis is an oversimplification. There are avenues for raising funds other than property taxes. Bond issues are an example. But the analysis shows that the traditional revenue source, i.e., property taxes, would not have been a practical solution to the revenue shortage, and perhaps the needed services would not have been provided.

Summary

The Coal Board is a statutory invention created to manage earmarked funds from coal taxes and assist governmental units impacted by coal activity. These earmarked funds are provided by the coal producer's severance tax from the category referred to as the Local Impact and Education Trust Fund. The greater portion of this fund is available to be awarded to eligible governmental units in the form of grants at the discretion of the Coal Board. This discretion, however, is tempered by certain statutory requirements which establish maximum and minimum award amounts for various candidates. The lesser portion of the fund is set

aside in trust as an inviolate fund, dedicated to the funding of future education requirements through earnings from the investment of this trust.

The Coal Board has awarded grants of approximately $15 million as of January 1978, of which about 89 percent will provide direct benefits to Big Horn and/or Rosebud counties. School districts have been the most frequent recipient of these grants within the two counties. They collectively account for over 60 percent of the total for each county. Hardin, the special rural improvement districts in Colstrip, and Forsyth gathered the next highest percentages within their respective counties. The remaining recipients individually received a significantly lesser portion of the grants.

Once the grants have been awarded, the actual transfer of monies occurs at a much later date after appropriate expenditure documentation is submitted and approved by the Coal Board Administrator in the Department of Community Affairs. Thus, in determining the significance of the grants as a revenue source, the timing of the actual flow of funds to the recipients was considered. Also, it was necessary to consider only those funds received in FY 1977 since this is the most recent year in which financial reporting data is available for comparison. The Coal Board grant funds actually received in FY 1977 by Rosebud County, consist of only 24 percent of the total awarded, and for Big Horn County this figure is only 16 percent. Hence, the major significance or impact of the grants as a revenue source will be felt after FY 1977.

In FY 1977, however, the grant funds contributed substantial percentages of the revenue totals for most of the recipient entities. In developing this conclusion, an assumption was made that the total revenue

amounts were justified and would have been necessary even if Coal Board funds were unavailable. Under this scenario, it was suggested that Hardin, Forsyth, Lodge Grass and several school districts would have been financially strapped or cumbered in generating the equivalent of the grant funds under the traditional property tax sources.

In the next chapter we will leave revenue sources associated with coal activity and look at ways to estimate the expenditures necessitated by coal development. The revenue side presented above will be related to the expenditure determinations in order to measure the fiscal impact for Big Horn and Rosebud counties as a consequence of coal production.

CHAPTER V

MEASURING THE FISCAL IMPACT

Introduction

In Chapters III and IV some of the crucial issues surrounding public revenue associated with coal development have been outlined. In this chapter estimated public expenditures caused by the accelerated coal activity and these revenue amounts are compared. The separation of the coal-related expenditures from unrelated expenditures is not a straightforward task. There is no such breakdown on submitted financial reports, nor are there prescribing statutes which dictate certain expenditure requirements with coal activity. Thus, since there are no clearly-delineated historical records of coal-related expenditures, a measurement methodology must be employed to estimate these costs. Two measurement techniques are used primarily where applicable data exist. The first derives an historical relationship between basic employment and public expenditures. Because of data collection restrictions, this method is used only for the county governments. Once this relationship is established, the basic employment directly associated with increased coal development is removed from the model to estimate what the expenditures might have been if the coal-related employment had not occurred. The second technique compares expenditure patterns of similar entities completely unaffected by coal development to those in Big Horn and Rosebud counties. This comparison isolates the coal associated expenditures

from the normal changes in expenditures over time. A more detailed explanation of these methodologies and their results is contained in Appendices 1 and 2 respectively. Also, listings of the various financial and statistical data used in this chapter and these appendices are contained in Appendix 3.

Both of these techniques assume that the expenditures incurred were necessary to maintain the quality and availability of public services that existed before the accelerated coal activity, i.e., before 1971. This may not be a valid assumption. It is possible that available revenue has not been sufficient to supply services in response to greater public demands and, consequently, public services have deteriorated. Conversely, it is possible that new and abundant revenue sources associated with the coal and other industrial activities have enabled the acquisition of new public facilities that before were not affordable. For example, both Big Horn and Rosebud county governments have made substantial capital expenditures for roads and bridges, new buildings and improvements, hospital improvements, capital contributions to ambulance services, etc., in recent years. Also, in the last two fiscal years, Hardin, Forsyth, and Lodge Grass have all appropriated sizeable amounts to the Water and Street Departments for equipment and facilities. Hence, the issue becomes whether these expenditures were sufficient to satisfy new demands or whether the expenditures were made because of funding opportunities which have led to an overall improvement in public services.

Unfortunately, an assessment of such public service deteriorations or improvements is extremely subjective and will vary from one observer to another depending upon his own convictions or point of view. Therefore, no attempt is made to qualitatively assess public services and the

assumption as stated will be used. However, it was mentioned in Chapter II that in the judgement of one researcher public services remain limited in Rosebud County, but probably are as adequate as they were prior to the expanded coal activity.[1] Based on impressions from literature involving Big Horn County, a similar conclusion of changes in its public services is made. These judgmental factors lend some credence to the aforementioned assumption.

With this assumption, an estimate of fiscal impact is calculated by correlating the coal-derived expenditures with the coal-related revenues. It should be recalled that in Chapter I negative fiscal impact due to industrial development was defined as a negative balance when increased resultant expenditures were subtracted from induced revenue sources. This process of fiscal impact determination is used for the county and municipal governments. But, because of the unique funding mechanisms for school districts, a discussion of fiscal impact for them requires a slightly different approach.

County Governments' Fiscal Impact

Appendices 1 and 2 contain two different approaches to measure coal-related government expenditures since 1970 for Big Horn and Rosebud county governments. Each method provides slightly different results. However, these differences are fairly insignificant on a cumulative basis. Therefore, it was decided to average the results of the two methods in arriving at a final estimate of the expenditures for county purposes.

A combination of the two methods gives a cumulative estimate of county expenditures of $3,580,000 in Big Horn County and of $6,166,000 in

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[1] See Chapter II, section entitled "Historical Literature."

Rosebud County associated with accelerated coal activity from FY 1971 through FY 1977. These estimates have been rounded to the nearest thousand dollars. It should be noted that only the total expenditures for the seven-year period are considered. The year-to-year expenditure estimates vary considerably because of various capital expenditure programs in the two coal mining counties. Although the two methodologies employed consider capital expenditures, they are unable to accurately allocate these expenditures to any given year. In fact, the techniques have attempted to spread the capital expenditures over the entire seven years. Therefore, this timing difference makes an accurate estimate of the expenditures for a given year impossible.

Next, it is necessary to compare these estimated expenditures with the coal-induced revenues in order to assess the fiscal impact. The revenue sources that will be considered include property taxes, Coal Board grants and the "Coal Producing Counties" portion of the coal severance tax. These latter two sources can be computed directly from Table 17 in Chapter IV and Table 12 in Chapter III, respectively.

The estimate of the property taxes is not quite as simple. First, the addition to the tax base from the Net and Gross Proceeds Taxes, listed in Table 7 is considered. These annual taxable valuation amounts are added from FY 1971 through FY 1977. Next, these totals are multiplied by the approximate mill levy for county purposes that was used in FY 1970, i.e., 30 mills for Big Horn County and 50 mills for Rosebud County.

These millage rates are selected because we are attempting to measure whether or not coal-related additions to the tax base have the potential to offset increased expenditures, i.e., these millages will give an estimate of the tax revenue that could be generated under a

scenario of no greater tax burden than existed prior to the stimulated development. It can be seen, however, that the actual millage rates have declined in recent years.[2] This is partially due to less dependence on property tax as a revenue source (see Table 4) and as will be discussed below, substantial increases to the tax base from the oil and gas proceeds tax. But the millage rate assumption conjectures that these events have not occurred and that taxes have remained constant. Using these millage amounts, an estimate of the property tax on the extracted mineral is made.

Next, the changes in taxable valuation due to coal facilities, equipment, and employment must be estimated. First, the taxable amount associated with oil and gas production is subtracted from the total taxable valuations. The oil and gas taxable amounts cannot be attributed to coal production and therefore must be eliminated in estimating changes in the tax base due to coal activity. The oil and gas taxable amount is substantial, especially in Rosebud County. For instance, it accounted for 25 percent of Rosebud County's taxable valuation for FY 1977 and 22 percent for FY 1978.[3] These percentages are greater than those reported for coal Net and Gross Proceeds Taxes in Table 7 for the same years.

However, there are only a few employees associated with oil and gas production who reside in Rosebud County. Actually, there have been no employees reported in this industry sector for Rosebud County for the

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[2]See Appendix 3 for details.

[3]Montana, Department of Revenue, "Report of the State Department of Revenue, for the Period July 1, 1975 to June 30, 1976," Helena, Montana, p. 92; unpublished data from the Department of Revenue, Helena, Montana; and taxable valuation figures given in Appendix 3.

last seven years.[4] The low employment implies few residents are associated with the industry and as a consequence, the industry places only relatively minor demands on government services. Hence, oil and gas extraction in Rosebud County is a significant tax source with little reciprocating governmental expenditure requirements. Consequently, it will be shown that this industry is probably subsidizing the coal industry in accommodating its share of Rosebud County's government expenditures. Similar arguments, although not on nearly as great a scale because of substantially less production, could be made for Big Horn County.

Now that the major changes in taxable valuations which cannot be correlated with coal facilities, equipment, and employment have been eliminated, an estimate of the changes due to these causes can be made. The technique used is similar to the coal-related expenditure methodology described in Appendix 2. For reasons presented in Appendix 2, the counties of Blaine, Phillips and Roosevelt are used as baseline counties. The average change in their tax bases (excluding oil and gas taxable amounts) from FY 1970 to FY 1977 is assumed to be the normal change associated with county growth and progress unaffected by a major coal development. This percentage is then applied to Big Horn and Rosebud counties. This derived tax base change is then subtracted from the actual tax base change to provide a crude estimate of coal-related changes. Finally, the coal-related taxable valuation amounts are multiplied by 30 and 50 mills for Big Horn and Rosebud counties respectively to estimate the potential taxes. The arguments presented above for using these tax rates are applicable here as well.

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[4]U.S., Department of Commerce, Bureau of Economic Analysis, unpublished Regional Economic Information Summary Employment Data, Washington, D.C.

These calculations described above are added to provide a rough cumulative estimate of potential revenue for funding county operations due to the coal development over the period of major coal activity. They are: $3,373,000 for Big Horn County and $3,668,000 for Rosebud County. Comparing these estimates of revenue with the estimated expenditures presented above, a measure of fiscal impact for the county operations is developed.[5]

This analysis shows that no significant negative fiscal impact from coal activity has occurred in Big Horn County.[6] However, on the contrary, a substantial negative impact is estimated for Rosebud County. In Rosebud County, it appears that other funding sources (such as oil and gas taxes) have provided the revenue to offset the fiscal deficit associated with coal development.

A word of caution must be issued in interpreting these results. These results are from estimates and not actual accountings. The methodologies employed produce crude, but plausible results. The significant difference between estimated expenditures and revenues in Rosebud County (almost $2.5 million) provides strong evidence that a negative fiscal impact as defined has occurred. However, it would be invalid and inaccurate to use these figures out of context to draw any other conclusions than those presented here.

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[5]Using the previously stated estimates of expenditures, these comparisons are as follows: 1) Big Horn County - Expenditures $3,580,000 and Revenues $3,373,000; 2) Rosebud County - Expenditures $6,166,000 and Revenues $3,668,000.

[6]The difference between the estimates of expenditures and revenues is less than 6 percent and because of the lack of preciseness in the estimation techniques, this is considered insignificant.

Municipal Governments' Fiscal Impact

Procedures similar to those described for the counties can be utilized to measure the fiscal impact on the municipalities associated with coal development. First, a cumulative estimate of coal-related expenditures from FY 1971 through FY 1977 can be developed.[7] The results, rounded as before, are $856,000 for Hardin, $2,194,000 for Forsyth, and $368,000 for Lodge Grass.

These expenditures are compared to the associated revenues to determine a measure of the fiscal impact. For the municipalities only Coal Board grants and property taxes provide coal-related revenues. The Coal Board grants can be determined from Table 17 in Chapter IV. For the impact period funds received from these grants through FY 1977 include $147,418 for Hardin, $769,683 for Forsyth, and $271,341 for Lodge Grass. It will be shown below that these grants have provided a much more significant revenue source than property taxes associated with the coal activity.

In order to estimate coal-related property taxes, the first step is to measure the changes in taxable valuation caused by coal expansion. Using the comparison technique described for the counties above, several municipalities unaffected by coal development were selected as baseline units. For reasons explained in Appendix 2, the entities to be compared with Hardin and Forsyth consist of: Chinook, Malta, Poplar, and Wolf Point; and the entities selected for Lodge Grass include: Brockton, Froid, and Saco.

Comparing the results of the average growth in the tax base for these selected municipalities with the coal municipalities gives an

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[7] See Appendix 2 for details.

estimate of taxable valuation attributable to accelerated coal production. Congruent with the preliminary conclusions in Chapter III, these changes in tax base are relatively minor. The tax base in Lodge Grass has, in fact, grown at slower pace than the average of its selected baseline municipalities. This probably is due to the substantial population decline experienced in Lodge Grass for the period.

Using 45 mills as an approximate rate for Hardin and Forsyth prior to the increased mining activity, a measure of taxes due to coal taxable valuation changes without an increased tax burden is calculated. In reality this tax burden has increased, since from Appendix 3 it is apparent that both municipalities have levied the statutory maximum millage rates for the last three fiscal years.

Since the tax base for Lodge Grass has grown slower than for the baseline entities, no estimate of changes due to coal development can be made. However, it is fairly safe to conclude that these changes would be relatively minor and therefore negligible for the purpose of estimating the coal-induced revenue.

These property tax estimates are added to the Coal Board grants and rounded to approximate total coal associated revenues of $156,000 for Hardin, $785,000 for Forsyth, and $271,000 for Lodge Grass. These figures can now be compared to the estimated expenditures given above to provide some conclusions on fiscal impact.

The greatest negative fiscal impact appears to have occurred in Forsyth where estimated revenues are less than estimated expenditures by over $1.4 million. It is also apparent that raising the tax level to the statutory maximum (which has been the case) will still not satisfy this fiscal deficit. So again, other sources of revenue have been utilized

to counter greater government expenditures resulting from the coal boom. To a lesser extent, negative fiscal impact has also occurred in Hardin. Here estimated expenditures associated with coal have outpaced revenues by $700,000 which is roughly one-half of the deficit shown for Forsyth.

The measurement of the fiscal deficit for Lodge Grass in comparison is relatively small at about $97,000. This fact coupled with the inability to estimate property tax changes attributable to coal, dictate that the safest conclusion is that no negative impact or only a slight negative impact has occurred in Lodge Grass. Due to the remoteness of Lodge Grass from the coal mines, this conclusion seems intuitively reasonable.

Similar to the caveat offered at the end of the last section, this section concludes with a warning against using the derived figures out of context. The figures are crude estimates based on "soft" data and may present misleading implications if taken at face value and not in the context of their intended use.

School District Fiscal Impact

The measurement of the various school district fiscal impacts is complicated and constrained by statutory funding and expenditure requirements. Most of these complexities were explained in Chapter III in the discussion on school property taxation. For instance, the maximum general fund budget is set by law based on an enrollment formula and some special education costs (see Figure 2). Also, at the county level two mandatory levies are set with any surplus reverting to the state equalization fund. Surpluses have been generated by Big Horn and Rosebud counties for the last several years. Additionally, any deficiencies in the maximum general fund not satisfied by local property tax utilizing established millage amounts, are fulfilled through state equalization aid.

Hence, school district financial requirements are closely regulated. About the only flexibility that exists is in the Voted Levies which can be enacted to meet deficiencies in the total general fund (i.e., requirements beyond the set maximum general fund), building requirements, debt service insurance, tuition, etc. It has already been pointed out in Chapter III that these voted levies in the two coal mining counties have increased substantially more over the past eight school years than the state average increase. However, these Voted Levies are a fairly small portion of the total district revenues as can be seen by reviewing the school financial data in Appendix 3. Consequently, an evaluation based mainly on the Voted Levies could conceivably draw some improper conclusions for the total district financial picture.

As a result, only a cursory attempt will be made to measure school district fiscal impact. The first evidence that additional demands are being made on school districts can be seen from the enrollment data. Because of changes in the structuring of the school districts and the formation of new districts, it is difficult to compute enrollment numbers by district for comparison beyond the most recent school years. However, the enrollment totals for the counties can be computed and compared to the state as a whole.

For example, the entire elementary school district enrollment for Big Horn County increased by 110 students, or 6.6 percent, from school year 1969-70 through 1977-78. Enrollment peaked in the mid-seventies and since has been steadily declining. Similarly, Rosebud County elementary school enrollment grew by 519 students, or 51.1 percent, for the same period. Enrollment has also declined in the most recent school years. The total state elementary enrollment showed an overall 7.2 percent

decrease over the same period. Total enrollment at the high school level expanded by 268 pupils, or 55.6 percent, in Big Horn County and by 178 pupils, or 55.8 percent, in Rosebud County over the last eight school years. Recent enrollment in both counties has shown a minor decrease in the latter years. The state high school enrollment overall has shown an 8.5 percent increase for the same period. Hence, the preliminary evidence provides a basis for suspecting a greater demand for school services in both Big Horn and Rosebud counties than the state in general.[8]

In Chapter III it was proposed that the most likely school districts to experience a negative fiscal impact would be those adjacent to the districts with coal facilities. These districts would not have the benefit of a major increase in tax base, and yet may have enrollment gains due to employees who choose to reside away from their place of work. These potential negative fiscal impact candidates in Rosebud County include all the school districts with the exception of Rock Springs (District 2), Ingomar (District 33), and Colstrip High School and Elementary Districts (District 19). In Big Horn County, all the school districts would be included except those containing coal mines which are Hardin High School (District 1), Hardin-Crow Agency (District 17-HO, Squirrel Creek (District 1), and Lodge Grass High School (District 2).

Looking at the available enrollment and financial data listed in Appendix 3 and considering the distance from the coal facilities, several other of the less likely impacted school districts can be eliminated. In the final analysis, the most likely negative fiscal impact candidates

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[8]Montana, Office of the Superintendent of Public Instruction, Department of Financial Services, unpublished enrollment data, Helena, Montana.

consist of Lodge Grass (District 27) and Wyola (District 29) in Big Horn County, and Forsyth High School (District 4), Rosebud High School (District 12), Forsyth (District 4), Lame Deer (District 6) and Ashland (District 32-J) in Rosebud County.

Most of these districts in Rosebud County have received coal impact grants through the Coal Board. In fact, over 80 percent of the Coal Board grants for Schools in Rosebud County have been awarded to these candidates. On the contrary, neither of the candidates in Big Horn County have received Coal Board grants, nor have they been certified by the Department of State Lands as eligible for grant assistance. (See Table 14 and Table 15.)

It's difficult to carry the fiscal impact analysis much further because of the aforementioned constraints and restrictions. It's possible to conclude only that some school districts are likely to have experienced negative fiscal impact because of coal development, and that the most likely districts are those in the previous paragraph. This conclusion does not entirely rule out other school districts as having felt a negative fiscal impact. Those school districts such as Colstrip High School and Elementary (District 19), Hardin High School (District 1), Lodge Grass High School (District 2), and Hardin-Crow Agency (District 17-H) have obviously had enrollment growth and required greater school expenditures, but they have also had substantial growth in the district tax base. Thus, it's less likely that negative fiscal impact has occurred for these districts.

Summary

This chapter has attempted to measure the fiscal impact caused by the coal boom for the various local governments in Big Horn and Rosebud

counties by comparing estimated coal-related expenditures with coal-induced revenues. Unlike many of the revenue sources which can be identified from a review of the financial records, the expenditures associated with coal activity must be estimated. Detailed methodologies describing the utilized estimation techniques and their results are contained in Appendices 1 and 2.

A comparison between revenues and expenditures shows that no major negative fiscal impact has occurred for the Big Horn County government and the town of Lodge Grass as a result of the accelerated coal productivity. On the other hand, the Rosebud County government, Forsyth, and Hardin were shown to have all experienced a substantial negative fiscal impact because of coal mining. This negative fiscal impact is purely definitional resulting from a greater estimate of expenditures due to coal development than corresponding revenues. In reality, all of this fiscal deficit has been satisfied from other revenue sources.

The measurement of school district fiscal impact is hampered by the extreme regulation of the majority of school district financing. Higher enrollment figures and greater voted levies for school financing within these counties than for the state averages, provides prima facie evidence that greater demands have been placed on school district finances and it is likely that some negative fiscal impact has occurred. The most likely candidates for this occurrence were identified in the chapter. It was also shown that most of these candidates have received substantial Coal Board grants to assist in their financial requirements.

Throughout this chapter it was cautioned against misusing any of the derived dollar figures out of context. As with most analytical techniques, several assumptions and reliance upon data accuracy must be made, which cannot be entirely free from error. However, in the context of

their intended use, They are defensible and thus provide strong assurance that the results as stated are plausible.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This last chapter is divided into three major sections. The first summarizes the highlights of earlier chapters. The second presents conclusions regarding the results of measuring fiscal impacts on the various local governments in the two county study area. In particular, it addresses the hypothesis formulated in Chapter I to determine if the study findings have shown it to be valid. The last section presents some recommendations for consideration by executive and legislative agencies, based upon what has occurred in these two counties because of the coal boom.

Summary

Chapter I contained an outline of the scope of this study and stated that the prime objective was to measure the fiscal impact on the local governments in Big Horn and Rosebud counties caused by accelerated coal production since 1970. Negative fiscal impact in this context was defined as a negative balance when coal-related expenditures are subtracted from coal-induced revenues. The local governments that were included in the study consist of the county, municipality, and school district forms. Based on preliminary research, the following hypothesis was formulated: "Negative fiscal impact, defined as a negative reconciliation of collected revenue to local government expenditures as a direct

consequence of coal development from 1970 to the present does not generally exist for Big Horn County. However, a minor negative fiscal impact may have developed at the municipal level largely due to tax revenue distribution inequities inherent in Montana's tax laws. On the other hand, because of major population growth associated with coal development, negative fiscal impact has resulted for several of the local governments in Rosebud County." The scope of this research project was designed to compile sufficient evidence to validate this hypothesis.

In the second chapter we reviewed the related literature which had the greatest significance to this study. Although several documents were cited, only two of the more closely related ones are mentioned in this summary. An unpublished report from the Office of the Legislative Fiscal Analyst entitled "Coal Impact and Coal Board Grants" was highlighted. The report contends that many of the established criteria for awarding Coal Board impact aid are not being adhered to and strongly recommends stricter adherence. It further contends that many of the grant recipients have not experienced any fiscal impact on their governmental financing ability as evidenced by some of the lowest tax levies and highest taxable valuations of property in the state. As a consequence, the report implies that a tax relief program is resulting from the Coal Board grants. This conclusion slightly contradicts the expected outcome of this paper.

Another historical study entitled "Colstrip Montana; A Case Study in Rapid Population Growth and Local Finance" was reviewed because it provides useful insight into the impact on public services in Rosebud County. The study points out that with the onslaught of the major coal activity, local tax rates went up initially and only in recent years have

the tax rates been declining, largely a result of substantial additions to the tax base from the coal industry.

In Chapter III the revenue issues surrounding the coal development were explored. In particular, the major taxation laws and requirements associated with coal mining were presented. Property tax has traditionally been the mainstay for funding local governments in Montana. There has been a shift in the importance of property tax, however, as a major revenue source within the two mining counties, especially for the municipalities. In their case, this situation has developed largely because the property tax system does not generate sufficient funds to meet present day expenditure requirements. The complexities of the school district property tax system and state equalization funding mechanisms were also presented. Because of statutory requirements, the swollen tax bases in these two mining counties have probably provided relatively greater benefits to the state school system as a whole than to the school districts within the counties themselves. The school districts outside the mining counties receive substantial funding from taxation of coal mining in these counties through Foundation Program surpluses and state deficiency and permissive levies. But they haven't experienced the problems due to enrollment gains because of accelerated population growth that are prevalent in the mining counties. These problems have caused the dependency on Voted Levy amounts for school districts within the coal counties to increase at a greater rate than the state as a whole.

The Net and Gross Proceeds Taxes are a form of property tax on extracted coal collected for local governments which contain the mines within their taxing jurisdiction. The taxable amount attributable to

coal extraction represents a sizeable addition to the two counties' tax base; notably in the case of Big Horn County where for the last three fiscal years this addition has consistently been over 50 percent of the total county tax base.

The Coal Producer's License and Severance Tax (coal severance tax) is another major tax paid by the coal companies. Coal companies in Big Horn County paid about $23.5 million in FY 1977 and in Rosebud County over $12.1 million for the same year. A small portion of this tax (currently about 1.5 percent of the total) is given directly to the county governments for expenditure at their discretion. Additionally, other funds in the form of impact grants and highway development aid from collection of this tax may also provide assistance to these counties. But most of the tax is earmarked for a coal trust fund and other uses by the state.

Other taxation and revenue sources discussed included: Corporation License Tax, Electrical Energy Producer's Tax, Resource Indemnity Trust Tax, and Royalty Payments for State and Federal Lands Leases. These sources are significant in amount, but provide only indirect benefits to the counties where the mining takes place, and are shared by other counties within the state as well.

In Chapter IV we looked at the Coal Board and Related Grants. Grant awards to date total almost $15 million, 89 percent of which will benefit Big Horn and/or Rosebud counties. The funding for these grants is derived as a fixed percentage (which will decrease in future years) of the coal severance tax. Although Big Horn and Rosebud counties' share of the grant awards is considerable, only a small percentage of these awards had actually been received as of the end of FY 1977. Even

so, this small percentage represented a significant portion of total revenue for many of the local governments; particularly for Lodge Grass, Rosebud Elementary School District 12, Forsyth, Forsyth Elementary School District 4, Ashland Elementary School District 32-J, and Hardin, in descending order. These governmental units would have had considerable difficulty in raising the equivalent sums from their normal taxation sources.

In Chapter V we compared the expenditures and revenues associated with coal development. Expenditures were estimated using analytical techniques which are carefully outlined in Appendices 1 and 2. The final analysis demonstrates the occurrence of negative fiscal impacts for the Rosebud County government, Forsyth and Hardin. Big Horn County government and Lodge Grass on the other hand, are shown to have experienced little or no negative fiscal impact as a consequence of coal activity. Because of the intensive control over their financing, no clear-cut measurement could be made of fiscal impact for the school districts. Instead, only the most likely candidates for negative fiscal impact are identified, consisting of districts which, although in close proximity to the mines, do not have them and associated facilities within their taxing jurisdiction.

Conclusions

Four major conclusions are drawn based on the study results. They are as follows:

(1) The evidence supports the validity of the hypothesis formulated at the outset of this study in Chapter I. The Big Horn County government and the Town of Lodge Grass were shown to have

experienced no major negative fiscal impact whatsoever due to accelerated coal activity. Additionally, it was suggested that the prime school district candidates for negative fiscal impact include only Lodge Grass (District 27) and Wyola (District 29). But neither one of these districts has sought or been declared eligible to receive Coal Board Impact grants. Hardin, which is the major municipality in Big Horn County was the only governmental unit shown to have experienced a negative fiscal impact as defined because of coal. Thus, Big Horn County with the exception of Hardin, generally appears to have escaped a major negative fiscal impact on its local governments.

Rosebud County showed the opposite results. It was estimated that for the county government and Forsyth, coal-related expenditures had outstripped coal-induced revenues by a substantial margin. Also, several school districts were identified as probable victims of negative fiscal impact. The majority of these districts had received large grants from the Coal Board. Hence, it is concluded that coal is generally not paying its way in Rosebud County, nor has it generated the revenue potential to do so under present tax distribution systems without imposing a greater tax burden on county residents than existed prior to FY 1970.

(2) The coal industry is paying substantial tax and royalty payment amounts in Montana. But, the state government is the greatest recipient of these revenues with a much smaller portion going to the local governments in the coal mining counties. This is particularly true for the municipalities which benefit only from minor gains in their property tax rolls because of new residents' real and personal property and from Coal Board impact grants. These minor tax base gains coupled with statutory millage limitations make the present property tax system ineffective for the municipalities in raising sufficient revenue by itself to offset greater expenditure requirements because of coal activity. This development is evident since the municipalities have been levying the maximum allowable millages, but property tax in

recent years has significantly declined in importance as a revenue source for them.

The coal industry's significant contribution to local governments' tax bases has enabled the payment of large sums to the state school equalization aid program. The mining counties have provided large surpluses to the state equalization fund under the Foundation Program and reverted substantial revenue collections from state deficiency and permissive levies, which ultimately are allocated to school districts outside these counties. The irony of this development is that at the same time school districts within these counties have seen their funding amounts from Voted Levies grow at a greater rate than in the state as a whole.

(3) The Coal Board grants have been a significant and necessary revenue source for many of the local governments in these two counties; especially for the municipalities and some school districts. For the county governments, on the other hand, Coal Board grants have been a relatively insignificant revenue source, and these grants account for a small portion of the total grant awards. Also, it was noted that the pending coal severance tax lawsuit may hinder or disrupt the continuance of this assistance.

(4) Although no real fiscal deficits have occurred in these counties, this is due to reliance upon other revenue sources such as federal and state intergovernmental aid, and oil and gas taxes, rather than from coal-related sources. This offers some explanation for the lower millage requirements in these counties than for other counties in the state. However, with the exception of the Big Horn County government and a few school districts, the disappearance of these other revenue sources would impose greater tax burdens on the rest of the local governments in the two counties than existed prior to FY 1970. The dependence on other revenue is especially precarious for the municipalities that are in fact taxing at highest allowed rates, and for which the discontinuance of this revenue may bring about

a severe financial situation since no alternative revenue sources are currently available as a replacement.

Recommendations

Most of the disconcerting situations described in these conclusions can be mitigated by recommendations which can soften their impacts. Some of these recommendations are as follows:

(1) The second conclusion above alluded to some of the problems and distribution inequities in the present taxation structure. This is particularly true for the property tax system. The county governments, however, do have the means to generate more property tax revenue if needed because of the enormous growth in their tax bases. But this contingency is not available to the municipalities, and perhaps this inability of the present property tax system to cope with needed expenditures created by public service demands upon the municipalities because of the coal activity, is the most glaring problem presented in the study. The adoption of a form of Tax Base Sharing System throughout the entire county offers a potential improvement. This probably would require approval at both the state and local levels. Such systems have been adopted by other states[1] and would allow the municipalities to receive some of the benefit of the taxable valuation associated with the coal mines and coal-fired electrical generation plants that they justly deserve.

(2) The third conclusion above discussed the significance of Coal Board grants to the various local governments in the two mining counties. Certain statutory criteria dealing primarily with fiscal impacts on local governments, are the only allowed criteria for consideration of grant approvals. It is surmised

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[1]David L. Sjoquist, "Sharing the Property Tax Base; An Alternative to Metro Government," Atlanta Economic Review, Jan-Feb 1978, pp. 56-62.

that these criteria above may be inadequate. Although specifically excluded from the scope of this study, it is inferred that the fiscal impact on local governments does not by any means measure the full impact on these mining counties and their residents. It is recommended that the criteria be revised to consider socioeconomic impacts inherent in a major industrial boom. These impacts, although not easily measured, are real and worthy of some moderation. Examples of these impacts might include a quickened pace of life, congestion and overcrowding, inflation in prices because of greater demands and subsequent shortages of goods and services, etc. These factors cannot be directly mitigated through a governmental grant program, but may be indirectly compensated through new or improved community services and activities worthy of some moderation.

(3) The fourth conclusion above pointed out the dependence upon other revenue sources and some inadequacies of the coal development under the present tax system to fund its share of public services provided by the local governments. This dependence creates a significant potential problem should these other revenue sources disappear as is a common occurrence, particularly in federal funding programs. It is recommended that contingency planning be initiated which can assist these governments should such a situation develop. An example may be to provide for the utilization of monies being placed in the Coal Trust Fund created by the coal severance tax legislation if it should become necessary.

Concluding Remarks

This study has concluded that the coal boom in Big Horn and Rosebud counties has had major fiscal effects on many of the counties' local governments. These conclusions were based on several necessary assumptions which qualify the study results. It is paramount that the reader understand these assumptions and their relationship to the conclusions presented before

accepting the results. These assumptions, however, have received considerable substantiation and are felt to be defensible.

It is apparent that many of the discovered problems will be exacerbated if there is no attempt to mitigate them. The coal boom will undoubtedly continue for several years. Therefore, it behooves policy-makers and regulatory agencies to be aware of these and potential problems, and take the necessary action to deal with them.

A P P E N D I C E S

APPENDIX 1

BASIC EMPLOYMENT MODEL

Introduction

The basic Employment Model attempts to establish a relationship between the levels of basic employment and the levels of government expenditures. Basic employment is defined as those employment sectors (i.e., sectors of industry delineated by the Standard Industrial Classification Manual) whose level of economic activity is determined by forces outside the area of concern. These sectors are primarily those that export products or services and hence, bring income into the region. All other employment sectors are classified as non-basic or derivative, and serve primarily local needs. The level of the non-basic sectors is largely dependent upon the basic activity.

Thus, it can be determined that basic employment is the driving force for much of the change in population. Economic activity or inactivity in the basic sectors will lead to the creation or disappearance of jobs respectively which affect population in-migration, and out-migration patterns and consequently, the population level itself. It is the local population or citizenry that places demands on government services and in turn influences the level of government expenditures. So, in a round-about fashion, it can be reasoned that there should be a strong correlation between basic employment and government expenditures.

The actual technique employed in this model is the use of multiple

regression to derive equation coefficients and measurements of significance and reliability. For this study, the expenditure amount in any given year is the dependent variable and the various basic employment figures by sector comprise the independent variables. Because employment figures cannot be disaggregated beyond the county level, this methodology is inappropriate for the municipalities or school districts.

Additionally, the source of employment data covers only the years 1967 through 1975. The employment data are taken from unpublished material developed for the Regional Economic Information System (REIS) by the Bureau of Economic Analysis, Department of Commerce, Washington, D.C. Although it may be possible to estimate the more current employment figures from other sources, it was decided not to do so since different measuring criteria may remove the necessary consistency in the data from year to year. The expenditure figures used as the dependent variable are listed by entity in Appendix 3. However, because of the sensitivity and disclosure requirements associated with the employment figures which are the independent variables, their actual number by sector cannot be listed.

Through a series of calculations, various combinations of regressions were performed until the best possible relationship was found. Once this relationship was established, the regression equation was used to predict what the government expenditures might have been had the coal activity not expanded, i.e., the employment levels for the direct coal-related sectors (e.g., Coal Mining, Heavy Construction Contractors, Railroad Transportation, etc.) were assumed to remain at the same level as recorded in 1970. These assumed levels were used in the regression equation along with the recorded levels for the sectors not affected by coal in any given year and, hence, a predicted expenditure figure was

calculated for that year. However, this assumption implies that the contribution to government expenditures from coal-related employment does not change over time if the employment level remains constant. This may be an invalid assumption because of inflation. Therefore, the dollar amounts must be adjusted to reflect inflationary changes.

The calculated expenditure amount without increased coal activity can then be subtracted from the actual expenditure amount. The difference is an estimate of expenditures necessitated by the change in coal development. The next sections will present the regression results and estimated coal-related expenditures by county.

Big Horn County Coal Expenditures

The employment sectors in Big Horn County with significant levels of employment over the years of concern that were selected to be basic employment consist of:[1] Agriculture, Coal Mining, Crude Petroleum and Natural Gas, Heavy Construction Contractors, Textile Mill Products, Food and Kindred Products, Miscellaneous Manufacturing, and Railroad Transportation. These sectors represent the independent variables.

Initially each individual independent variable was added into the regression one at a time in a stepwise manner to look at the effect of its addition on the overall relationship. As could be expected the correlation matrix for the independent variables revealed a high correlation between several of the independent variables. Thus, the problem of multicollinearity or lack of independence between the independent variables was present.

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[1]The selection of the basic employment sectors for this county was based on criteria utilized in an unpublished report entitled, "Montana Alternative Simulation System," by Bruce Finnie, Department of Community Affairs, Research and Information Systems Division, Helena, Montana, March 1977.

The extreme result of this problem is an arbitrary assignment of coefficients for the mutually correlated variables. Because the value of the coefficients is essential in our methodology, it was necessary to remove these correlated variables. Since Coal Mining is the key variable, all other variables highly correlated with coal were eliminated. These remaining variables were then examined for a strong correlation between each other. Also, the partial correlation of the independent variables with the dependent variable was considered in determining which variables to eliminate.

Finally, only three variables remained which were: Coal Mining, Textile Mill Products, and Food and Kindred Products. Next these three variables were regressed in a stepwise additive procedure. But it became apparent that the addition of the latter two variables did not improve the results, i.e., the adjusted R-Squared and standard error of the estimate deteriorated. So, it was decided to regress the expenditures in terms of Coal Mining employment alone. Since this still provided far from completely satisfactory results (i.e., R-Squared equals about .74), some transformations of the independent variable were tried to see if there was better relationship than a linear one. This also was unsuccessful.

Hence, the final results that were used are given below. The regression equation is:

$$Y = 516741.30145 + 3242.60268X$$

where: Y = Government Expenditures and X = Coal Mining employment. Other derived statistics include: R-Squared = .73873; Standard Error of Estimate = 191,410.80; Computed T-Value = 4.4488; F-Value = 19.79186; and the Durbin-Watson Statistic = 1.58305.

The Coal Mining employment figure was seven in 1970 and under our assumption of no change in coal activity, this number was placed into the regression equation to derive the projected expenditure level without accelerated coal production. This equation will estimate the expenditures in terms of 1970 dollars, i.e., real dollars with 1970 as the base year. In order to provide a meaningful comparison, these expenditures were then inflated to put them in current dollars by using the GNP Implicit Price Deflator indexes for purchases of goods and services by state and local governments derived by the Bureau of Economic Analysis.[2] These adjusted expenditure amounts were next subtracted from the actual expenditure figures providing an estimate of the coal-related expenditures. Results of these calculations are given in Table 18.

TABLE 18

BIG HORN COUNTY

(Regression Results)

Year	Actual Expenditures	Regression Equation Expenditures (Adjusted for Inflation)	Coal-Related Expenditures
1971	$ 585,918	$577,201	$ 8,717
1972	$ 728,057	$609,567	$118,490
1973	$1,261,838	$658,117	$603,721
1974	$1,250,994	$728,244	$522,750
1975	$1,155,608	$792,977	$362,631

SOURCE: Derived from recorded expenditures listed in Table 24, multiple regression results described above, and implicit price deflator indexes in the following manner: Coal-Related Exp = Act. Exp - (Reg Eqt. Exp. x Price Deflator Index).

[2]GNP Implicit Price Deflator indexes are derived from the data presented in Business Statistics 1975, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, D.C., May 1976, p. 5, which uses 1972 as a base year, i.e., in 1972 the index equals 1.00.

Rosebud County Coal Expenditures

The employment sectors in Rosebud County with significant levels of employment that were selected to be basic employment consist of:[3] Agriculture, Coal Mining, Heavy Construction Contractors, Lumber and Furniture, Food and Kindred Products, Transportation Equipment, Petroleum Refining and Related Products, Miscellaneous Manufacturing and Railroad Transportation.

Essentially the same steps outlined for Big Horn County were followed in arriving at the best relationship between government expenditures and basic employment levels for Rosebud County. In the final analysis, a simple linear regression using only Coal Mining employment proved to be the best estimator of county expenditures. The final regression equation is:

$$Y = 506{,}946.2868 + 4653.53744\ X$$

where: Y = Government Expenditures and X = Coal Mining employment. Other derived statistics include: R-Squared = .94058; Standard Error of Estimate = 160,044.34; computed T-Value 10.52668; F-Value = 110.81108; and the Durbin-Watson Statistic = 2.07209. Hence, this relationship for Rosebud County is much more reliable and significant than the relationship derived for Big Horn County.

The Coal Mining employment figure for Rosebud County in 1970 was 41. Using this figure, the coal-related expenditures are derived in the same fashion as was explained for Big Horn County. The results are listed in Table 19.

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[3]The selection of the basic employment sectors for this county was based on the criteria utilized in an unpublished report entitled, "Montana Alternative Simulation System," by Bruce Finnie, Department of Community Affairs, Research and Information Systems Division, Helena, Montana, March 1977.

TABLE 19

ROSEBUD COUNTY

(Regression Results)

Year	Actual Expenditures	Regression Equation Expenditures (Adjusted for Inflation)	Coal-Related Expenditures
1971	$ 869,132	$ 746,583	$ 122,549
1972	$ 900,133	$ 788,447	$ 111,686
1973	$1,974,999	$ 851,244	$1,123,755
1974	$1,530,676	$ 941,950	$ 588,726
1975	$2,053,868	$1,025,679	$1,028,189

SOURCE: Derived from recorded expenditures listed in Table 25, multiple regression results described above, and implicit price deflator indexes in the following manner: Coal-Related Exp. = Act. Exp - (Reg. Eqt. Exp. x Price Deflator Index).

Confidence in Results

The regression equations provide the best linear approximations of the relationship between the dependent and independent variables. However, it is by no means an absolute relationship since the actual data values will deviate above and below the regression estimates. A Standard Error of Estimate is generated to express the degree of scatter in the data. In this study the limited number of observations (i.e., small sample size), is also contributing to the size of the Standard Error of Estimate figures.

These Standard Error of Estimate figures can be added or subtracted from the derived expenditure amounts to produce a range of probable results. The wider the range, the more confident we can become that our estimated interval will contain the actual expenditure amounts.

Using a Student t Distribution for small sample sizes, a 95 percent

confidence interval was examined for Rosebud and Big Horn county governments, i.e., 95 percent of the time the actual expenditure amounts are contained in our selected interval. The negative fiscal impact determination presented in Chapter V for the Rosebud County government remains essentially unchanged under this examination. The only difference is that the magnitude of the negative fiscal impact ranges from slight to extreme. But the results do provide greater confidence that the conclusion of the negative fiscal impact for the Rosebud County government is highly probable.

The examination of the interval for the Big Horn County government, however, is not as clear. In Chapter V it was shown that estimated coal-related expenditures are nearly equal to estimated coal-induced revenues for the Big Horn County government. By including a range in the estimate of expenditures, the results tend to show a slightly negative fiscal impact or a slightly positive fiscal impact (revenues exceed expenditures) depending upon whether the top or bottom estimates in the range are utilized, thus, the results are inconclusive.

The discussion of confidence in the regression results is presented to demonstrate the impreciseness of the technique utilized. It also serves to further substantiate the warnings made in Chapter V against using the amounts of negative fiscal impact presented in that chapter out of context.

Summary

The Basic Employment Model described in this section demonstrated the use of multiple regression to model government expenditures in terms of the county basic employment sectors. Coal Mining employment exhibited the strongest correlation to expenditures in both counties and little

improvement in the relationship existed when other basic sectors were added. Therefore, Coal Mining employment was used by itself as the best approximator for explaining variations in the levels of government expenditures. The derived regression equations with adjustments for inflation were used to project what the government expenditure levels might have been if the coal activity had remained at the same production level as recorded in 1970. This projection was then subtracted from actual results leaving an estimate of expenditures necessitated by the production expansion that resulted subsequent to 1970.

One major limitation of the model is that it only projects the expenditures through 1975 because of the lack of consistent basic employment figures beyond that year. This constraint, however, will be removed by averaging the results with the methodology to be discussed in Appendix 2 which projects through 1977. Also, the technique was limited to usage for county government projections since employment figures are not disaggregated below this level. Finally, it was noted that the predictive relationship is much more significant and reliable for Rosebud County than for Big Horn County.

APPENDIX 2

ENTITY COMPARISON MODEL

Introduction

The Entity Comparison Model compares expenditures of similar entities which are completely isolated from coal development to the expenditures of the coal-impacted entities. This comparison is a form of a 'with' and 'without' technique where in this case, coal production is the parameter being compared. The entities chosen to be the 'without coal' or baseline units were selected because of numerous historical similarities to their coal-impacted counterparts prior to the major coal activity. This comparison methodology makes the basic assumption that growth trends and public service requirements for entities have been historically similar and would have continued to be similar in the future, if a significant economic change (such as coal) had not been introduced. As will be shown later, this assumption appears to be valid for those baseline units unaffected by a major economic change.

Selection criteria for choosing baseline entities included population trends prior to 1970, economic bases, land area, and of particular significance to this study, association with Indian reservations. Over 80 percent of Big Horn County, and about seven percent of Rosebud County, is comprised of Indian reservation land. Because of unique programs and funding requirements for Indian reservations, it is highly probable that local government expenditures will be affected in some fashion.

The historical expenditures from FY 1960 through FY 1977 were then plotted for the selected governmental units to examine expenditure growth trends and similarities. Next, the changes in expenditure levels after 1970 were averaged for all the selected baseline units. Averaging was necessary to smooth out fluctuations due to capital expenditure programs in any given year. Then, the percentage of change in this average from year to year was calculated. Finally, starting from FY 1970 the derived percentages were applied to the 'with coal' units to project the expenditures that might have been recorded without the coal development. The difference between these projections and the actual expenditure figures provides an estimate of the coal-related expenditure requirements. Specific illustrations of this technique are provided below as the results of the methodology for the counties and municipalities are shown.

County Comparison Results

The counties selected to be the baseline consist of Blaine, Phillips, and Roosevelt counties. A listing of some of the economic, demographic, and geographic characteristics is provided in Table 20 below, along with similar characteristics for Rosebud and Big Horn counties.

The county government expenditure figures for each of these counties are contained in Appendix 3. A visual comparison of the trends for these expenditures from FY 1960 through FY 1977 is demonstrated in Figure 3. From Figure 3, it is apparent that fairly substantial growth in expenditures has occurred since 1970 for all the counties being studied. However, the expenditure jumps are much more dramatic in the case of Rosebud and Big Horn counties. This greater expenditure increase will also be apparent for some of the coal related municipalities. Although much of this increase is due to greater demands on public services

TABLE 20

COUNTY ECONOMIC, DEMOGRAPHIC, AND GEOGRAPHIC CHARACTERISTICS

Counties	Percentage of Total Personal Income Derived From Farming (1970)	Population 1970	Percent Change in Population Between 1960 & 1970*	County Land Area (Square Miles)	Percentage of Land Area Comprising Indian Reservations	Percentage of Land Area Used for Agriculture
Big Horn	47.8	10,057	+ 0.5	5,023	80	98.6
Rosebud	28.8	6,032	- 2.5	5,037	7	89.2
Blaine	49.6	6,727	-16.9	4,275	23	82.6
Phillips	57.9	5,386	-10.6	5,213	4	54.8
Roosevelt	37.1	10,365	-11.6	2,385	70	93.8

SOURCE: Taken from County Profiles prepared by the Division of Research and Information Systems, Department of Community Affairs, Helena, Montana and various county "Situation Statement" reports prepared by the U.S. Department of Agriculture, Washington, D.C.

*Although it is not apparent from these percentages, without exception all of the counties' populations peaked in the mid-sixties with a gradual decline through 1970.

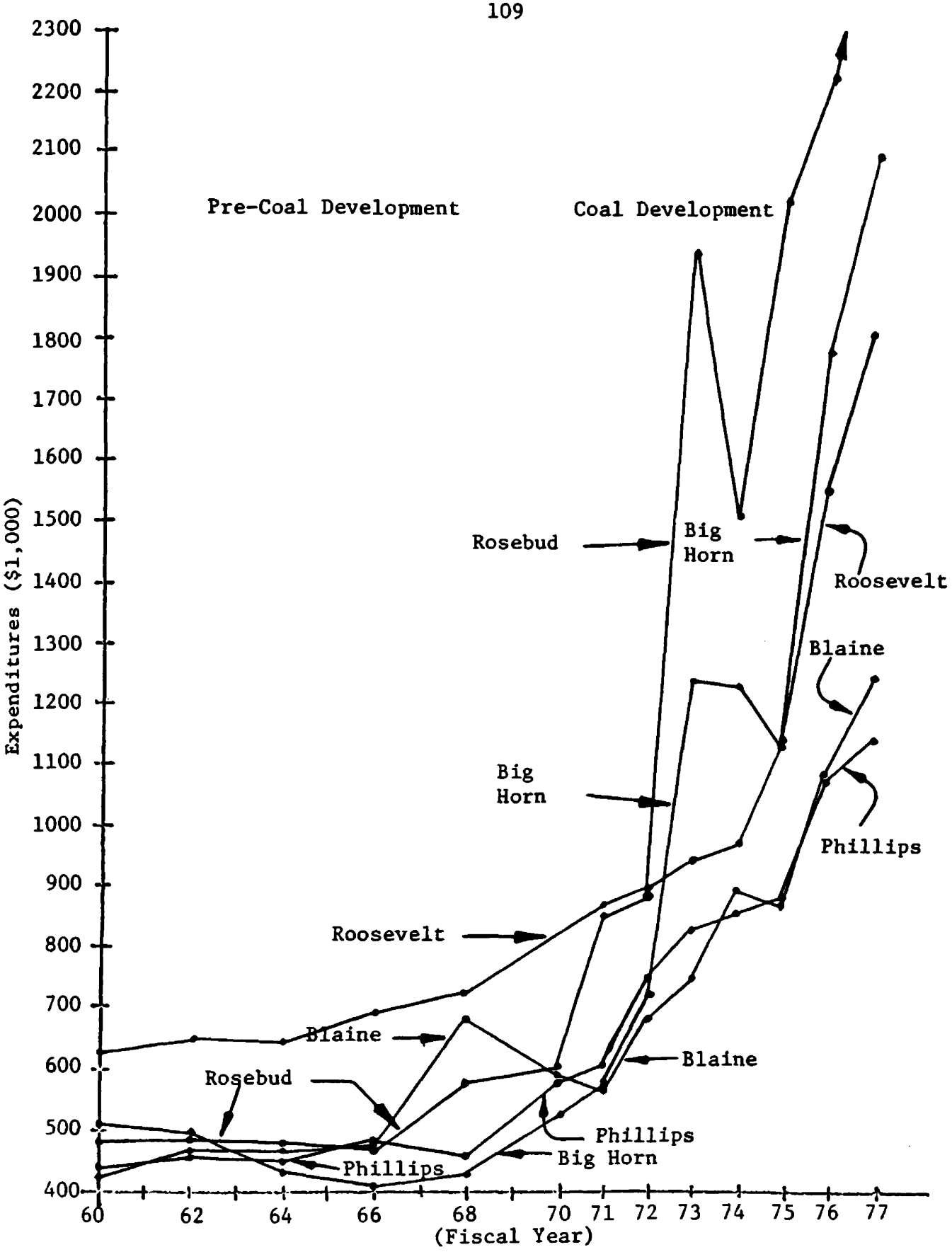

Fig. 3. County Expenditures

SOURCE: Plotted from figures presented in Appendix 3.

associated with the coal boom, some of it may be due to the change in the way capital expenditures are funded. A common method of funding a major public facility is to issue bonds and gradually pay for the facility over the life of the bond issue. However, with the availability of Coal Board grants for funding approved projects, some capital expenditures will be reflected in the year the grant is received and not spread over several years in lesser amounts like the bond issue method. Hence, the grant program may have caused some of the dramatic fluctuations depicted in the expenditure patterns for the coal connected entities. From Figure 3, it also can be seen that the expenditure growth rates for the baseline counties have primarily remained relative to each other, similar to the pattern established in the years prior to 1970. This result gives some support to assuming that equivalent results would have developed in Big Horn and Rosebud counties if the coal growth had not occurred.

The expenditures for the baseline counties after 1970 are now averaged and a percentage of change between the various years is determined. These derived percentages define the amount of expenditures that will be added to the prior year's expenditures for the coal-impacted counties starting in FY 1969.[1] For example, the baseline average percentage of change from FY 1969 to FY 1971 is 4.9 percent. Then in the case of Big Horn County, the recorded FY 1969 expenditures of $509,560 are increased by this percent giving a projected expenditure of $534,610. Next, the percentage change between FY 1971 and FY 1972 (13.2 percent)

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[1]Because expenditure data for Roosevelt County in FY 1970 was unavailable, fiscal 1969 was used as the starting point instead of fiscal 1970. For the municipalities, fiscal 1970 will be the starting point.

is added to $534,610 to approximate a projection of $605,437 for FY 1972. This procedure is continued through FY 1977. The differences between these projected and actual amounts provide an estimate of the coal-related expenditures. Final results for Big Horn and Rosebud counties are presented in Table 21.

A visual comparison between projected and actual expenditures is presented in Figure 4.

TABLE 21

COUNTY PROJECTED COAL-RELATED EXPENDITURES

Fiscal Year	Actual Expenditures	Projected Expenditures	Coal-Related Expenditures
Big Horn County			
1971	$ 585,918	$ 534,610	$ 51,308
1972	728,057	605,437	122,620
1973	1,261,838	650,372	611,466
1974	1,250,994	705,466	545,528
1975	1,155,608	751,736	403,872
1976	1,814,093	963,811	850,282
1977	2,144,504	1,090,455	1,054,049
Rosebud County			
1971	$ 869,132	$ 623,967	$ 245,165
1972	900,133	706,632	193,501
1973	1,974,999	759,077	1,215,922
1974	1,530,676	823,379	707,297
1975	2,053,868	877,382	1,176,486
1976	2,270,171	1,124,904	1,145,267
1977	3,037,194	1,272,716	1,764,478

SOURCE: Derived from recorded data in Appendix 3 and the methodology described above.

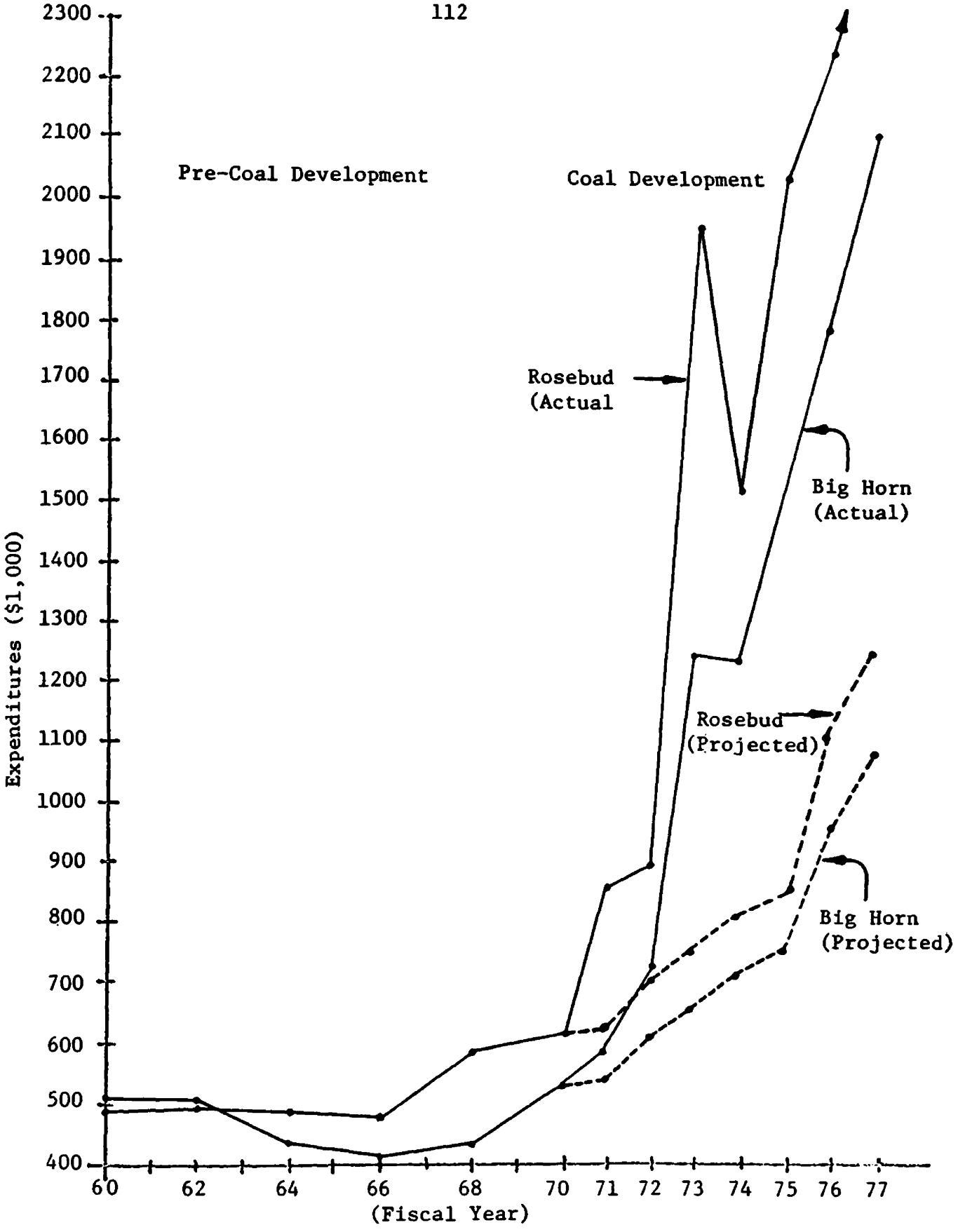


Fig. 4. County Expenditure Projections.

SOURCE: Derived from Figure 3 and baseline counties' average change from year to year.

City Comparison Results

The cities selected to be the baseline consist of Chinook, Malta, Poplar, and Wolf Point. These cities are all located within the baseline counties selected above. For similar reasons as listed above, it was concluded that these selected cities would be the best baseline approximators of expenditure patterns for Forsyth and Hardin. The similarities in the expenditures prior to 1970 presented in Figure 5 lend support for this conclusion.

Then under a similar procedure as described for the counties, the baseline cities are averaged, rates of change are calculated, and projections are made. Final results for the cities of Forsyth and Hardin are listed in Table 22.

A visual comparison between projected and actual expenditures is presented in Figure 6.

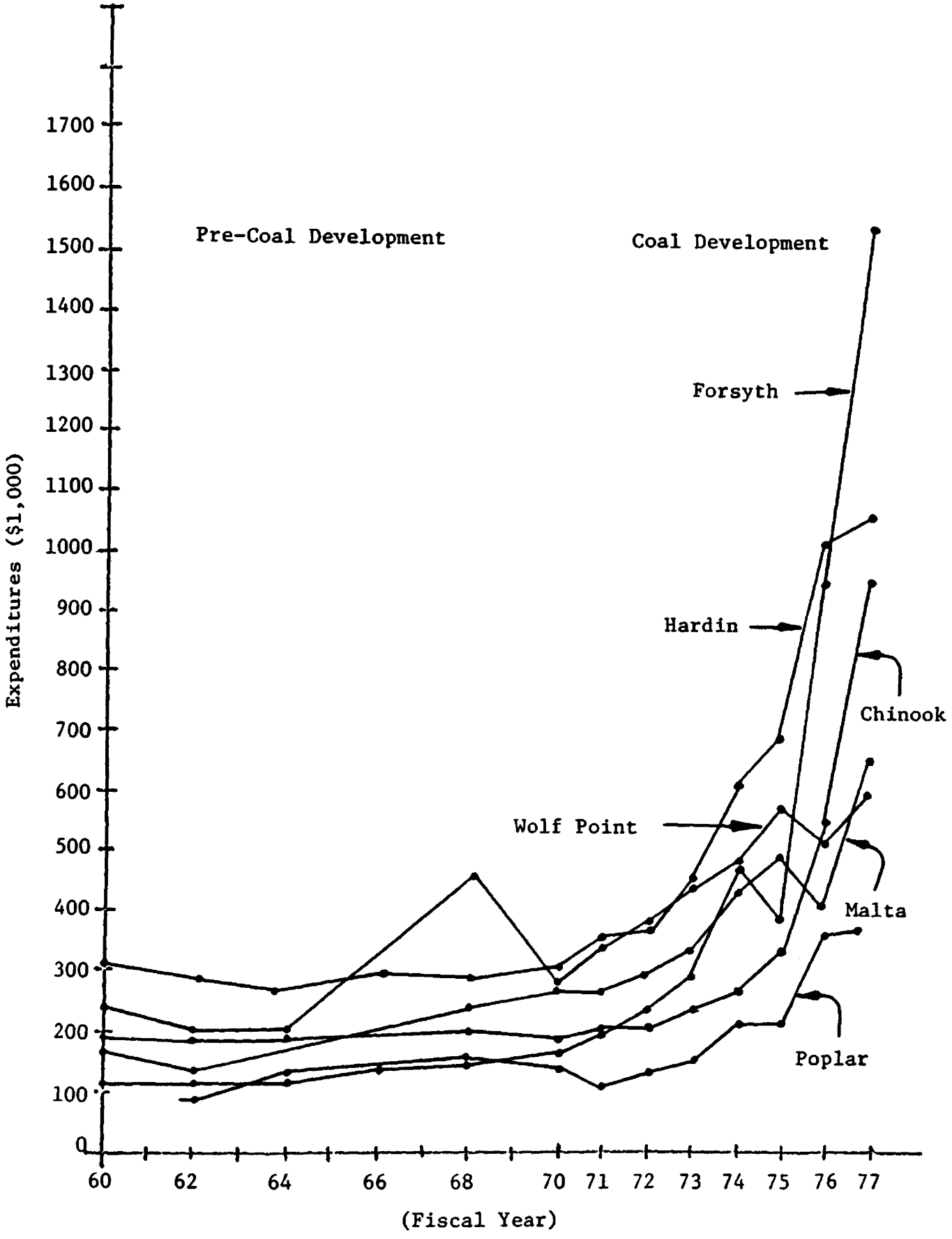


Fig. 5. City Expenditures.

SOURCE: Plotted from figures presented in Appendix 3.

TABLE 22

CITY PROJECTED COAL-RELATED EXPENDITURES

Fiscal Year	Actual Expenditures	Projected Expenditures	Coal-Related Expenditures
Hardin			
1971	$ 354,956	$ 328,651	$ 29,305
1972	357,929	357,611	318
1973	456,929	413,997	42,076
1974	618,529	494,643	123,886
1975	690,616	572,843	117,773
1976	1,025,152	645,170	379,982
1977	1,073,576	911,031	162,545
Forsyth			
1971	$ 195,797	$ 170,604	$ 25,193
1972	229,872	185,637	44,235
1973	288,561	214,907	73,654
1974	475,198	256,771	218,427
1975	394,784	297,296	97,488
1976	971,547	334,833	636,714
1977	1,571,085	472,811	1,098,274

SOURCE: Derived from recorded data in Appendix 3 and the methodology described above.

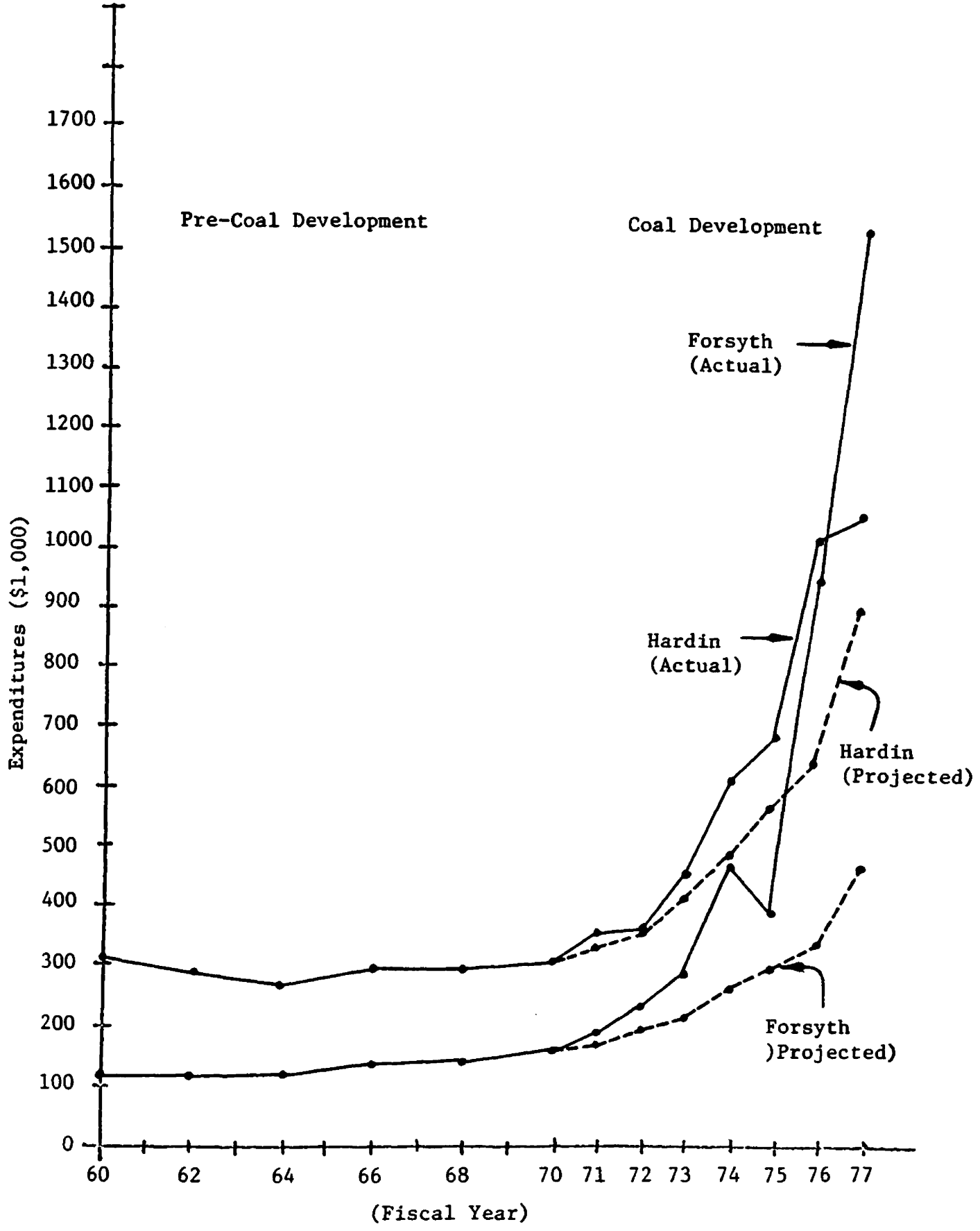


Fig. 6. City Expenditure Projections.

SOURCE: Derived from Figure 5 and baseline cities' average change from year to year.

Town Comparison Results

The towns selected as baseline include: Brockton, Froid and Saco. These towns are also located within the baseline counties selected above. The actual expenditures relationship is graphed in Figure 7. Final results using the comparison methodology is given in Table 23.

TABLE 23

TOWN PROJECTED COAL-RELATED EXPENDITURES

Lodge Grass			
Fiscal Year	Actual Expenditures	Projected Expenditures	Coal-Related Expenditures
1971	$ 35,350	$ 30,035	$ 5,315
1972	39,166	30,563	8,603
1973	49,177	32,897	16,280
1974	63,169	35,230	27,939
1975	56,024	29,706	26,318
1976	46,880	35,042	11,838
1977	312,627	40,737	271,890

SOURCE: Derived from recorded data in Appendix 3 and the methodology described above.

A visual comparison between projected and actual expenditures is presented in Figure 8.

Summary

The Entity Comparison Model uses a 'with' and 'without' technique to estimate government expenditures as a result of accelerated coal extraction in Big Horn and Rosebud counties. Baseline entities were selected

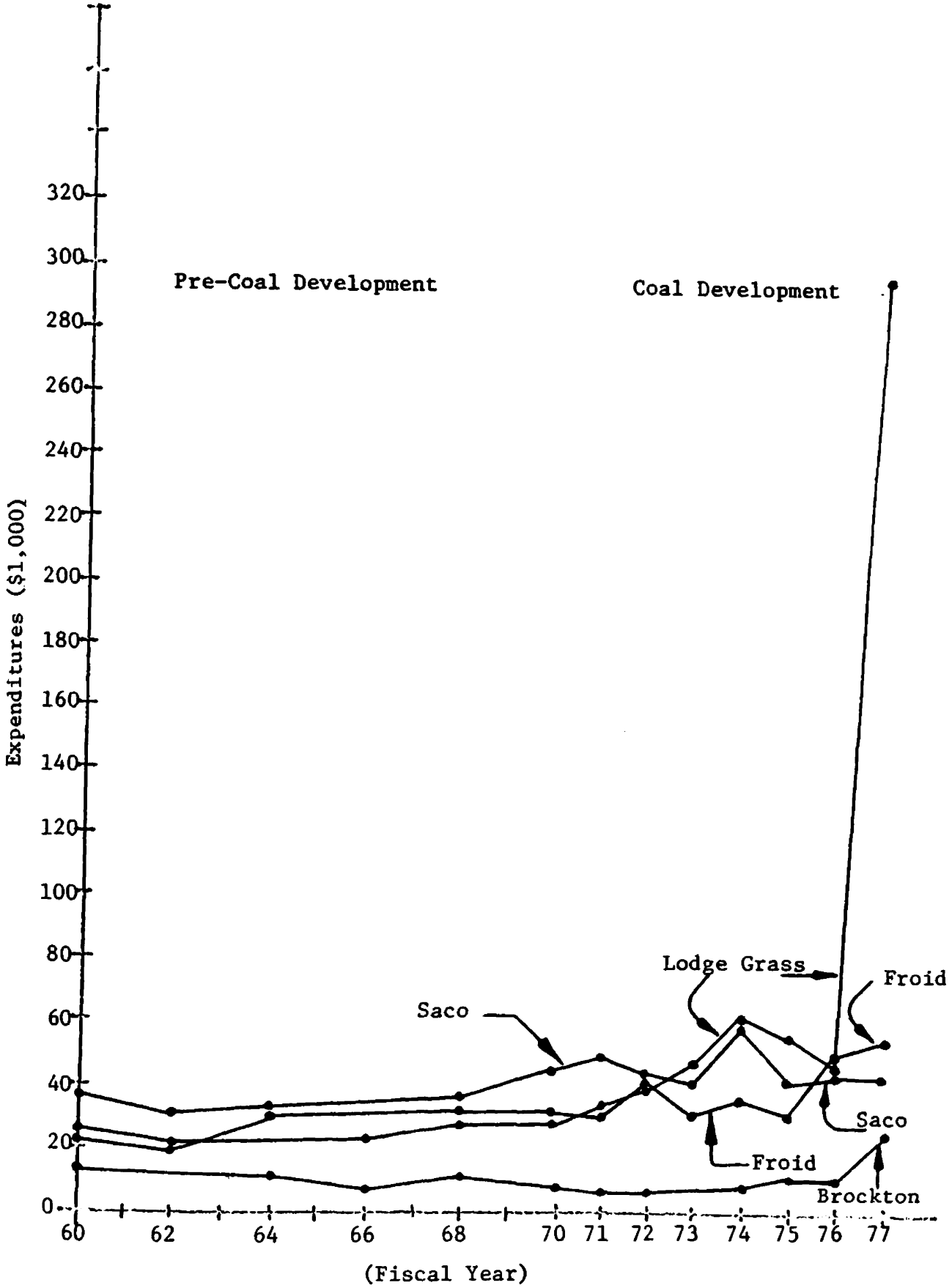


Fig. 7. Town Expenditures.

SOURCE: Plotted from figures presented in Appendix 3.

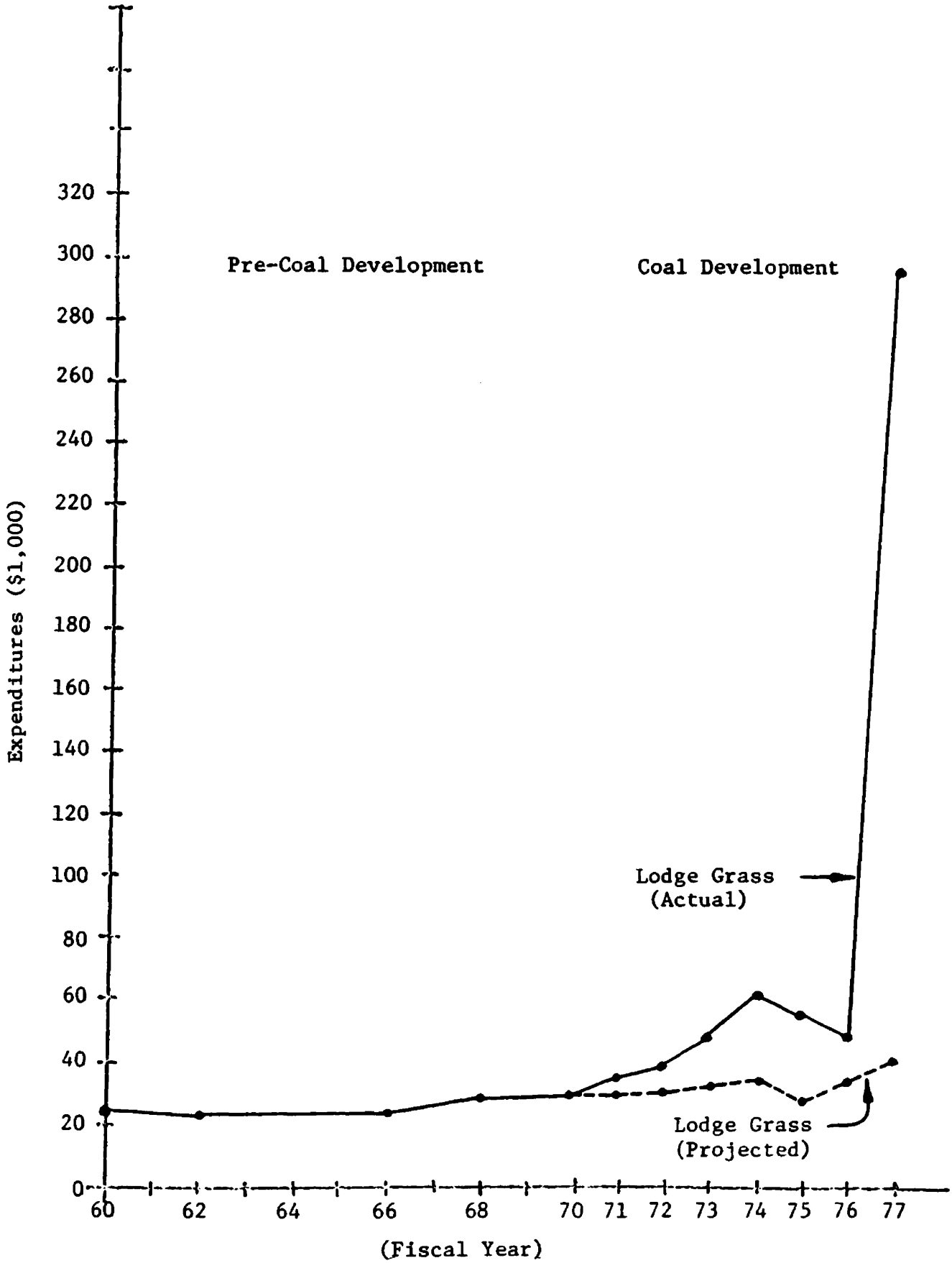


Fig. 8. Town Expenditure Projections.

SOURCE: Derived from Figure 7 and baseline towns' average change from year to year.

based on historical economic, demographic, and geographic similarities with the coal-impacted areas. These baseline units portray an estimate of the expenditure pattern without coal activity. An average of several baseline units is made to smooth out changes due to major capital expenditure programs. Next, the rates of change from year to year between these averages is found. Then these rates are used to impute the expenditures in the coal-infested entities under a scenario of no change in coal activity after 1970. The difference between projected and actual expenditures represents the coal-related expenditures.

APPENDIX 3

FINANCIAL AND STATISTICAL DATA

Introduction

This appendix lists much of the financial data for the local governments utilized throughout this study and particularly in Chapter V and Appendices 1 and 2. This data is in raw form and extracted from varying sources as indicated. It is presented by governmental entity.

TABLE 24

BIG HORN COUNTY FINANCIAL DATA

Fiscal Year	Total Revenues*	Total Expenditures*	Property Taxes	Taxable Valuation	Mill Levies*
1978	N/A	N/A	N/A	$54,333,415	18.98
1977	$2,610,389	$2,144,504	$ 738,047	47,881,802	14.83
1976	2,473,197	1,814,093	1,077,600	40,513,241	27.20
1975	1,816,075	1,155,608	841,448	29,412,823	26.72
1974	1,194,405	1,250,994	687,636	15,324,343	42.22
1973	1,224,788	1,261,838	622,119	14,479,872	44.28
1972	1,204,523	728,057	598,160	13,995,501	44.15
1971	582,322	585,918	397,842	13,493,182	30.93
1970	520,440	531,283	361,766	13,422,400	27.64
1969	466,355	509,560	311,369	13,056,540	23.91
1968	459,615	434,237	325,490	12,808,829	25.14
1967	488,983	475,969	311,348	12,225,926	25.27
1966	460,826	411,095	328,287	12,554,587	27.43
1965	477,960	440,293	296,186	12,658,969	26.59
1964	465,421	448,103	303,112	12,633,999	26.35
1963	450,178	449,527	294,059	10,104,452	32.27
1962	413,609	514,499	280,577	9,539,673	N/A
1961	438,788	432,322	292,532	9,805,650	N/A
1960	483,521	515,712	303,291	9,993,772	N/A

SOURCE: Extracted from "County Clerk's Annual Report to the State Examiner" over the years listed and the "Montana Property Tax Mill Levies," Montana Taxpayers' Association, Helena, Montana.

*County Purposes Only

N/A: Not Available

TABLE 25

ROSEBUD COUNTY FINANCIAL DATA

Fiscal Year	Total Revenues*	Total Expenditures*	Property Taxes	Taxable Valuation	Mill Levies*
1978	N/A	N/A	N/A	$86,650,731	16.517
1977	$4,069,332	$3,037,194	$1,552,982	70,704,358	22.117
1976	2,821,970	2,270,171	1,023,270	42,957,995	24.048
1975	2,515,319	2,053,868	924,589	25,666,296	34.384
1974	1,747,241	1,530,676	960,723	19,612,993	45.930
1973	1,762,855	1,974,999	851,209	18,121,757	45.437
1972	1,638,356	900,133	747,821	13,709,670	54.551
1971	855,059	869,132	607,610	12,515,430	46.907
1970	676,548	617,223	492,185	10,559,430	48.332
1969	668,821	594,730	517,209	10,556,966	49.859
1968	564,821	576,477	417,811	10,863,486	39.370
1967	546,348	531,595	407,316	10,574,343	37.870
1966	550,514	475,156	396,667	11,052,954	36.128
1965	475,784	535,272	331,983	12,394,277	28.456
1964	465,645	477,042	308,406	13,479,997	22.888
1963	446,175	484,597	273,837	14,798,890	17.660
1962	531,954	497,929	319,776	14,785,199	N/A
1961	533,439	417,999	333,148	14,343,761	N/A
1960	528,871	487,172	355,495	11,699,998	N/A

SOURCE: Extracted from "County Clerk's Annual Reports to the State Examiner" over the years listed and the "Montana Property Tax Mill Levies," Montana Taxpayers' Association, Helena, Montana.

*County Purposes Only

N/A: Not Available

TABLE 26

CITY OF HARDIN FINANCIAL DATA

Fiscal Year	Total Revenues	Total Expenditures	Property Taxes	Taxable Valuation	Mill Levies
1978	N/A	N/A	N/A	$3,157,998	70.50
1977	$1,061,594	$1,073,576	$166,608	3,123,857	67.50
1976	1,173,007	1,025,152	192,945	3,158,434	67.50
1975	684,107	690,616	179,885	2,960,026	62.50
1974	668,251	618,529	156,689	2,618,028	57.25
1973	550,518	456,073	136,024	2,485,212	51.12
1972	332,539	357,929	192,202	2,463,635	49.66
1971	392,052	354,956	188,587	2,344,386	51.39
1970	305,944	305,971	177,451	2,289,923	44.81
1969	270,512	260,129	160,317	2,245,392	42.49
1968	279,505	288,791	164,949	2,252,345	43.46
1967	275,121	287,049	158,261	2,165,049	43.21
1966	306,560	299,357	168,665	2,098,833	46.53
1965	267,180	249,695	157,809	1,960,104	43.55
1964	268,696	271,310	158,797	1,881,540	49.30
1963	295,731	330,844	135,396	N/A	49.50
1962	294,857	287,136	123,364	N/A	N/A
1961	283,029	259,506	135,403	N/A	N/A
1960	282,954	311,404	98,176	N/A	N/A

SOURCE: Abstracted from "City Clerk's Annual Report to the State Examiner" over the years listed and the "Montana Property Tax Mill Levies," Montana Taxpayers' Association, Helena, Montana.

N/A: Not Available

TABLE 27

CITY OF FORSYTH FINANCIAL DATA

Fiscal Year	Total Revenues	Total Expenditures	Property Taxes	Taxable Valuation	Mill Levies
1978	N/A	N/A	N/A	$2,296,375	67.00
1977	$1,781,878	$1,571,085	$114,120	2,043,000	69.00
1976	1,117,279	971,547	119,389	2,154,652	69.00
1975	420,356	394,784	103,073	2,140,950	55.00
1974	485,711	475,198	95,447	1,660,622	55.00
1973	297,728	288,561	70,925	1,593,052	48.00
1972	227,777	229,872	72,645	1,493,635	48.00
1971	194,115	195,797	69,437	1,407,935	47.00
1970	178,218	158,831	56,933	1,334,511	43.00
1969	153,080	129,598	54,280	1,297,178	43.00
1968	157,244	142,105	55,874	1,268,793	43.25
1967	141,279	152,441	48,240	1,233,260	38.00
1966	142,380	135,977	48,641	1,237,194	38.00
1965	132,048	125,944	46,170	1,181,466	38.00
1964	131,963	118,966	43,868	1,172,756	38.00
1963	152,711	111,135	63,070	N/A	38.00
1962	111,129	117,412	24,086	N/A	N/A
1961	138,944	138,456	61,480	N/A	N/A
1960	122,431	117,214	55,081	N/A	N/A

SOURCE: Abstracted from "City Clerk's Annual Report to the State Examiner" over the years listed and the "Montana Property Tax Mill Levies," Montana Taxpayers' Association, Helena, Montana.

N/A: Not Available

TABLE 28

TOWN OF LODGE GRASS FINANCIAL DATA

Fiscal Year	Total Revenues	Total Expenditures	Property Taxes	Taxable Valuation	Mill Levies
1978	N/A	N/A	N/A	$234,222	65.00
1977	$371,395	$312,627	$12,143	239,542	65.00
1976	69,685	46,880	16,969	260,779	65.00
1975	58,584	56,024	15,627	239,542	65.00
1974	55,612	63,169	17,134	234,513	60.00
1973	54,502	49,177	16,203	219,802	60.00
1972	34,903	39,166	16,557	221,417	60.00
1971	34,213	35,350	12,892	219,901	60.00
1970	31,579	29,753	14,016	206,581	60.00
1969	27,996	28,778	14,271	203,302	55.00
1968	28,354	28,817	14,336	198,122	55.00
1967	28,210	28,109	13,499	192,432	55.00
1966	28,583	24,629	13,210	197,617	55.00
1965	24,930	30,533	11,495	182,633	55.00
1964	N/A	N/A	N/A	150,855	54.00
1963	N/A	N/A	N/A	N/A	55.00
1962	26,549	23,580	4,500	N/A	N/A
1961	27,200	24,411	4,519	N/A	N/A
1960	28,650	25,599	4,701	N/A	N/A

SOURCE: Abstracted from "Town Clerk's Annual Report to the State Examiner" over the years listed and the "Montana Property Tax Mill Levies," Montana Taxpayers' Association, Helena, Montana.

N/A: Not Available

TABLE 29

OTHER ENTITY EXPENDITURE DATA

Fiscal Year	Counties (County Purposes Only)		
	Blaine	Phillips	Roosevelt
1977	$1,269,467	$1,151,954	$1,847,568
1976	1,095,187	1,087,672	1,660,368
1975	882,724	898,682	1,161,541
1974	902,217	872,390	987,198
1973	751,548	832,003	962,570
1972	695,861	753,761	920,585
1971	583,469	618,961	890,499
1970	596,097	576,782	N/A
1968	693,825	471,935	745,473
1966	476,552	480,685	703,320
1964	474,962	457,792	664,120
1962	461,634	457,815	667,003
1960	429,162	437,094	633,711

Fiscal Year	Cities			
	Chinook	Malta	Poplar	Wolf Point
1977	$967,087	$662,152	$364,663	$609,075
1976	554,867	407,013	359,988	521,494
1975	335,953	498,808	224,148	577,802
1974	271,764	430,710	224,710	486,094
1973	242,030	327,835	163,461	449,533
1972	205,588	294,311	136,960	384,898
1971	202,561	270,318	123,924	342,208
1970	191,139	271,508	138,699	272,864
1968	203,603	244,147	146,112	472,503
1966	N/A	N/A	N/A	N/A
1964	199,566	N/A	132,809	201,001
1962	195,519	126,219	100,000	202,325
1960	193,792	161,671	N/A	239,569

TABLE 29--Continued

Fiscal Year	Towns		
	Brockton	Froid	Saco
1977	$26,656	$50,429	$45,106
1976	10,587	48,737	45,784
1975	10,758	33,536	44,809
1974	9,435	35,503	60,734
1973	N/A	32,058	42,169
1972	7,980	40,539	43,155
1971	7,928	31,643	50,519
1970	8,747	34,282	46,214
1968	10,712	34,262	38,070
1966	7,981	N/A	N/A
1964	12,533	31,523	32,893
1962	N/A	20,875	31,666
1960	13,005	23,581	36,092

SOURCE: Abstracted from "County, City, and Town Clerk's Annual Report to the State Examiner" over the years listed.

N/A: Not Available

TABLE 30

BIG HORN COUNTY SCHOOL DISTRICT

FINANCIAL AND STATISTICAL DATA

District Information	1977-78	1976-77	1974-75	1969-70
Hardin High School (District 1)				
Expenditures	N/A	$ 931,133	$ 729,509	$ 358,284
Revenues	N/A	$ 2,103,440	$ 933,753	$ 416,298
Taxable Valuation	$20,610,121	$19,647,030	$12,929,815	$10,006,356
Voted Levy	$ 181,357	$ 110,143	97,667	44,478
Enrollment	518	551	502	350
Lodge Grass High School (District 2)				
Expenditures	N/A	$ 425,468	$ 293,832	$ 146,474
Revenues	N/A	$ 3,329,467	$ 282,335	$ 188,593
Taxable Valuation	$33,034,183	$27,431,266	$15,571,704	$ 3,481,821
Voted Levy	$ 191,000	$ 141,969	$ 81,481	$ 27,114
Enrollment	172	153	140	132
Pryor High School (District 3)				
Expenditures	N/A	$ 150,745	$ 178,023	N/A
Revenues	N/A	$ 235,772	$ 201,608	N/A
Taxable Valuation	$ 689,111	$ 838,976	$ 911,292	N/A
Voted Levy	$ 35,000	$ 49,610	$ 30,000	N/A
Enrollment	60	56	49	N/A
Squirrel Creek (District 1)				
Expenditures	N/A	$ 22,259	$ 28,187	$ 17,668
Revenues	N/A	$ 28,689	$ 36,723	$ 18,280
Taxable Valuation	$29,829,425	$24,190,835	$11,993,754	$ 598,708
Voted Levy	$ 6,500	$ 5,500	$ 2,400	$ -0-
Enrollment	16	10	14	N/C
Pryor (District 2)				
Expenditures	N/A	$ 235,689	$ 265,893	$ 63,206
Revenues	N/A	$ 276,355	$ 298,249	$ 115,665
Taxable Valuation	$ 689,111	$ 839,976	$ 911,292	$ 707,629
Voted Levy	$ 30,000	$ 27,526	$ 25,000	$ 14,467
Enrollment	59	84	76	N/C

TABLE 30--Continued

District Information	1977-78	1976-77	1974-75	1969-70
Community (District 16)				
Expenditures	N/A	$ 45,953	N/A	$ 36,287
Revenues	N/A	$ 52,506	N/A	$ 55,219
Taxable Valuation	$ 984,956	$ 899,816	$ 962,295	$ 749,456
Voted Levy	$ 9,000	$ 5,750	$ -0-	$ -0-
Enrollment	21	25	32	N/C
Hardin-Crow Agency (District 17-H)				
Expenditures	N/A	$ 2,379,218	$ 1,900,532	$ 976,867
Revenues	N/A	$ 3,792,811	$ 2,371,301	$ 1,089,958
Taxable Valuation	$19,251,925	$18,378,809	$11,520,441	$ 8,235,699
Voted Levy	$ 394,475	$ 316,000	$ 205,611	$ 63,645
Enrollment	1,243	1,223	1,218	N/C
Busby (District 17-K)				
Expenditures	N/A	$ 18,863	$ 19,644	$ 10,818
Revenues	N/A	$ 18,522	$ 24,407	$ 12,758
Taxable Valuation	$ 373,240	$ 368,405	$ 447,079	$ 294,725
Voted Levy	$ -0-	-0-	-0-	-0-
Enrollment	12	13	17	N/C
Lodge Grass (District 27)				
Expenditures	N/A	$ 731,304	$ 605,435	$ 254,855
Revenues	N/A	$ 984,481	$ 658,948	$ 358,293
Taxable Valuation	$ 1,996,052	$ 2,059,114	$ 2,300,917	$ 1,787,695
Voted Levy	$ 159,851	$ 114,322	$ 93,963	$ 24,180
Enrollment	324	353	331	N/C
Wyola (District 29)				
Expenditures	N/A	$ 477,878	$ 430,834	$ 91,099
Revenues	N/A	$ 523,182	$ 427,636	$ 95,879
Taxable Valuation	$ 1,208,706	$ 1,181,317	$ 1,277,033	$ 1,037,165
Voted Levy	$ 47,361	$ 47,848	$ 35,239	$ 8,859
Enrollment	90	84	104	N/C

SOURCE: Taken from school budgets and trustee reports which are submitted annually to the Department of Financial Services, Office of the Superintendent of Public Instruction, Helena, Montana.

N/A: Not Available N/C: Not Collected

TABLE 31

ROSEBUD COUNTY SCHOOL DISTRICT

FINANCIAL AND STATISTICAL DATA

District Information	1977-78	1976-77	1974-75	1969-70
Forsyth High School (District 4)				
Expenditures	N/A	$ 467,804	$ 640,215	$ 175,489
Revenues	N/A	$ 489,646	$ 434,293	$ 185,895
Taxable Valuation	$15,514,186	$15,684,057	$ 8,453,852	$ 3,768,428
Voted Levy	$ 109,788	$ 79,039	$ 37,675	$ 10,800
Enrollment	219	235	219	172
Rosebud High School (District 12)				
Expenditures	N/A	$ 186,978	$ 232,244	$ 99,415
Revenues	N/A	$ 207,648	$ 195,350	$ 100,438
Taxable Valuation	$ 2,806,783	$ 2,568,480	$ 3,128,473	$ 2,428,086
Voted Levy	$ 26,464	$ 20,000	$ 29,000	$ 10,768
Enrollment	69	70	53	52
Colstrip High School (District 19)				
Expenditures	N/A	$ 1,445,635	$ 517,369	$ 143,761
Revenues	N/A	$ 1,020,917	$ 1,606,139	$ 156,165
Taxable Valuation	$57,123,665	$44,387,328	$11,849,844	$ 2,320,304
Voted Levy	357,392	$ 192,527	$ 123,154	$ 11,706
Enrollment	209	198	186	95
Rock Springs (District 2)				
Expenditures	N/A	$ 9,296	$ 9,758	$ 7,346
Revenues	N/A	$ 11,155	$ 9,883	$ 8,493
Taxable Valuation	$ 556,923	$ 470,124	$ 434,965	$ 344,702
Voted Levy	$ -0-	$ -0-	$ -0-	$ -0-
Enrollment	8	6	8	N/C
Birney (District 3)				
Expenditures	N/A	$ 26,863	$ 26,626	$ 23,448
Revenues	N/A	$ 28,196	$ 26,415	$ 22,995
Taxable Valuation	$ 551,325	$ 501,848	$ 607,592	$ 451,921
Voted Levy	$ 2,300	$ 816	$ 8,188	$ -0-
Enrollment	18	12	15	N/C

TABLE 31--Continued

District Information	1977-78	1976-77	1974-75	1969-70
Forsyth (District 4)				
Expenditures	N/A	$ 622,832	$ 564,176	$ 268,705
Revenues	N/A	$ 1,002,209	$ 562,068	$ 265,334
Taxable Valuation	$ 6,699,308	$ 5,280,523	$ 5,295,415	$ 3,768,428
Voted Levy	$ 107,913	$ 72,223	$ 45,230	$ 10,800
Enrollment	439	471	465	N/C
Lame Deer (District 6)				
Expenditures	N/A	$ 760,153	$ 1,258,172	$ 219,608
Revenues	N/A	$ 518,723	$ 754,133	$ 233,167
Taxable Valuation	$ 168,776	$ 256,015	$ 228,683	$ 147,226
Voted Levy	$ 181,061	$ 215,663	$ 109,000	$ 55,334
Enrollment	409	383	328	N/C
Rosebud (District 12)				
Expenditures	N/A	$ 557,830	$ 282,672	$ 105,024
Revenues	N/A	$ 648,439	$ 236,404	$ 111,066
Taxable Valuation	$ 2,249,860	$ 2,098,356	$ 2,693,508	$ 2,083,384
Voted Levy	$ 29,696	$ 14,999	$ 22,000	$ 5,970
Enrollment	102	107	102	N/C
Colstrip (District 19)				
Expenditures	N/A	$ 1,629,168	$ 590,763	$ 93,224
Revenues	N/A	$ 1,265,044	$ 2,433,188	$ 81,813
Taxable Valuation	$55,621,325	$42,747,194	$10,207,513	$ 1,351,105
Voted Levy	$ 252,313	$ 135,176	$ 136,778	$ 11,975
Enrollment	435	399	277	N/C
Ashland (District 32-J)				
Expenditures	N/A	$ 213,747	$ 108,395	$ 62,884
Revenues	N/A	$ 222,947	$ 127,315	$ 91,843
Taxable Valuation	$ 1,283,348	$ 1,370,601	$ 1,367,447	$ 607,820
Voted Levy	$ 15,263	$ 6,626	$ 17,492	$ 12,000
Enrollment	99	94	90	N/C

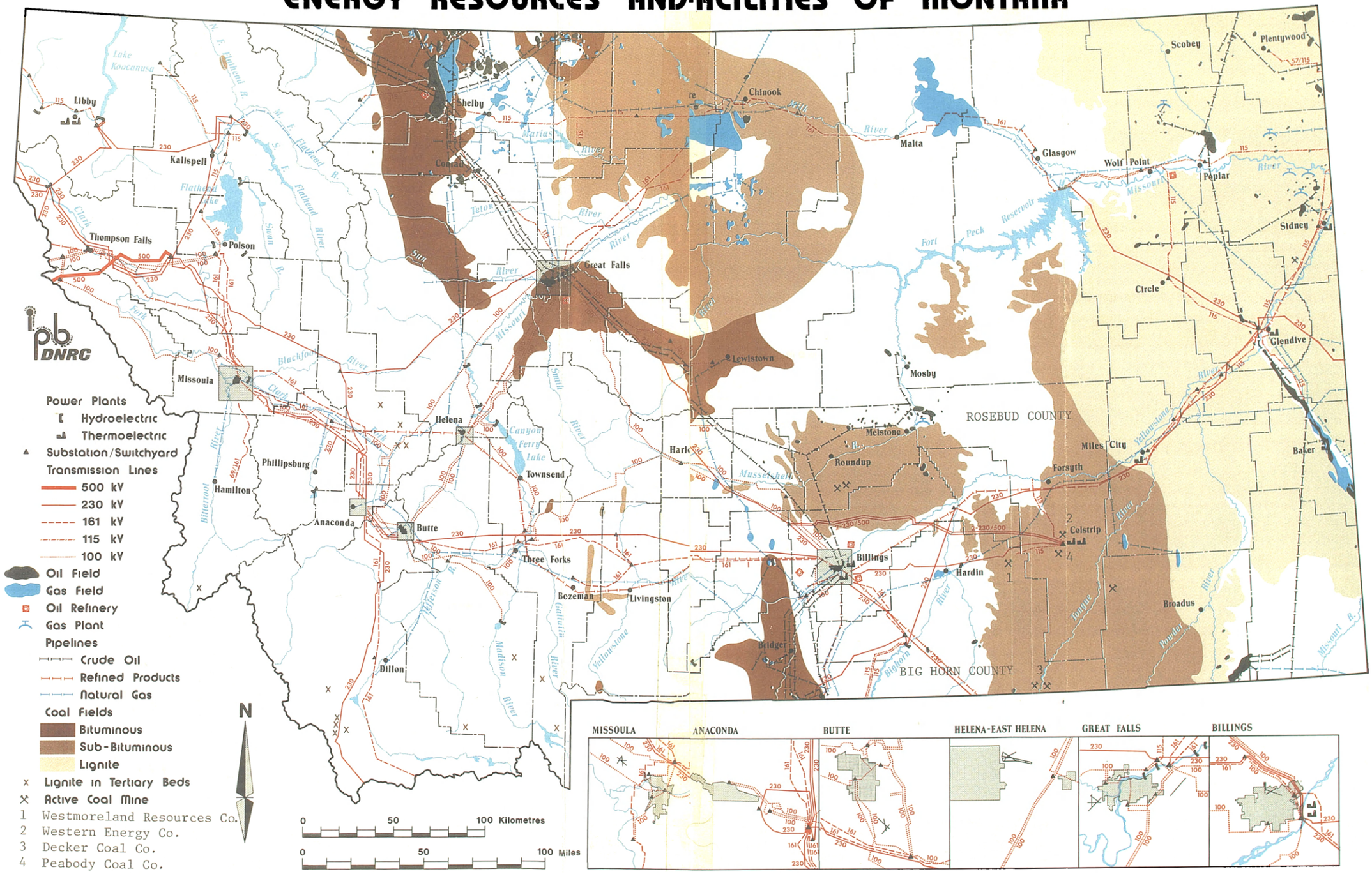
TABLE 31--Continued

District Information	1977-78	1976-77	1974-75	1969-70
Ingomar (District 33)				
Expenditures	N/A	$ 93,610	$ 78,854	$ 47,915
Revenues	N/A	$ 94,229	$ 73,273	$ 52,107
Taxable Valuation	$ 8,814,878	$10,403,534	$ 3,158,437	$ 1,527,958
Voted Levy	$ 70,008	$ 4,732	$ 26,186	$ 26,975
Enrollment	24	25	20	N/C

SOURCE: Taken from school budgets and trustee reports which are submitted annually to the Department of Financial Services, Office of the Superintendent of Public Instruction, Helena, Montana.

N/A: Not Available N/C: Not Collected

ENERGY RESOURCES AND FACILITIES OF MONTANA



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