Moffat County Economic Analysis

Econ 492-006 [Weiler]

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Executive Summary

Moffat County is the second largest county in Colorado based on square acreage and is located in the northwesternmost corner of Colorado, bordering Utah and Wyoming. The county may be off the beaten path, but it has much to offer such as nearly two million acres of public grazing land, rivers, and breathtaking landscapes. Since the beginning of Moffat’s development, coal mining has remained the most crucial part of driving Moffat’s local economy despite its constant decline since 2004 (Encyclopedia Staff, 2016). By 2025, Unit 1—a coal fired power plant—at the Craig power station will be closed, likely resulting in some decline in employment but more importantly, a loss of property tax revenue; the Craig station comprises about 40% of all taxable property value in the county and this will drop to 30% after Unit 1’s closing which amounts to a nearly $100,000,000 loss in property taxes.

Our goal is to create ideas to help alleviate the loss of Unit 1 and to spur economic growth within other sectors. To begin, because Moffat has abundant public lands and such a small population in contrast, we suggest using portions of the public land for ranching such as continuing with sheep and adding more species for diversification such as grass-fed beef, bison, and more. In addition, another great use for these public lands that can spur economic growth is tourism. The county’s 2 million acres of public lands have attracted more tourists over the last few years; there were nearly 6,000 more people who visited Moffat in 2013 than the previous year (Encyclopedia Staff, 2016). Tourism helps spur economic growth by supporting lodging and retail industries and promoting more tourism within the county can create many more jobs within these industries. By diversifying livestock and introducing more grazing for their 2 million acres of public land and also promoting tourism, we believe that economic growth in Moffat can
ascend even despite the closing of Unit 1. Whether it be through agriculture, tourism, or both Moffat County is in desperate need of economic activity in order to revitalize their economy.
Introduction

Moffat County is comprised of mostly rural, non-metro characteristics, and is located in the northwestern-most corner of Colorado. The county borders the states of Utah and Wyoming. Moffat County is the second largest county in Colorado based on square mileage, although the current population is 13,043, which is relatively small when compared to other metro counties. This depicts a negative growth rate of -5.3% since 2010 although projections estimate the population rising at a rate of 2.3% by 2030. (DATA USA). Out of the total population, the current employment sits at 6,338 with the primary industries including mining, utilities, and education. The most common industries include retail trade (13.1% of total employment), healthcare & social assistance (10.6% of total employment) and construction (9.6% of total employment) while the most specialized and highest paying industries are utilities with median yearly earnings of $79,797 and mining, quarrying, oil, gas extraction with median yearly earnings of $61,750 (DATA USA). Physically, Moffat County is a very rural county with a population density of only three people per square mile.

Moffat County is currently facing a large economic problem, to which there is diminishing hope for a successful economic future. Unit 1, out of a total of three, of the coal-fired Craig Station power plant is shutting down before 2025. The closing of this plant is essential for Moffat’s economy because the station, as stated by Craig Mayor Ray Beck, is the county’s largest taxpayer (Elliot, 2016). “We have a lot to offer. We’re open for business,” Beck stated as he that noted everyone will eventually encompass the pain of the plant closure. He stated that Moffat County is looking for ways to attract more employers. The important thing to note with the closing of unit 1 is that the loss of tax revenue is a much larger issue than the loss
of jobs. A detailed analysis of these tax numbers can be found in the Resiliency section on page 11.

Our goal is to generate ideas for new economic drivers in Moffat County, in order to alleviate the economic negativity of the closure of unit 1. Since Moffat County has 2 million acres of grazeable public land, we strongly believe that ranching, particularly grass-fed beef and bison, may be potential future drivers that could help turn the recent economic trends around. As you can see in Figure 1 (please see appendix), the vast majority of Moffat County is zoned for agriculture, whereas only a miniscule section is zoned for other uses, such as business, commercial, and residential use. Because of this, we feel as though Moffat County has a comparative advantage in the agriculture industry, especially in terms of their land to population ratio. The great magnitude of Moffat County’s land greatly out-powers their sub-par population, which is also why the population density of this county is extremely low. In addition to increasing agriculture within the county, we also suggest attracting more tourism to promote lodging and retail industries as the public lands also attract tourists across the county.

One question we ran into while brainstorming economic drivers was whether to promote multiple smaller businesses which may carry more risk, or to promote a few large businesses. Based on Moffat’s history, we suggest smaller businesses, as big businesses are the reason Moffat County is currently suffering. The county became too dependent on large business, so with the closing of Unit 1, the economy of the county is going to take a major loss. It is crucial to look into generating economic growth through small businesses, because this diversifies Moffat’s local employer portfolio. This way, if a small company goes out of business, the economic ripple effect on the people of Moffat County will be much less. When supporting multiple smaller businesses, it makes the loss of a single business less impactful on the economy.
One challenge facing small businesses is the tax burden they will be forced to encompass when the county’s largest taxpayer downsizes. In order to alleviate this, it is in Moffat’s best interest to increase economic activity through tax cuts and subsidies for small businesses. We must give small businesses a chance to thrive and regenerate money back into their local economy.

**Foundation**

It is important to look at the foundation of Moffat County to fully understand the area and make meaningful suggestions. Foundation looks at the county’s population, the working population, the industries within the county, which industries drive the economy, and the overall economic background of the county. The base analysis is used to understand the local economy by looking at different industries, local residents, the county’s main economic drivers, export drivers, and local jobs. Export industries (direct basic) are crucial because they create an inflow of revenue for the county while driving economic growth. Furthermore, the county’s assets are important to look at to fully understand the county’s foundation.

To begin, we started looking at Moffat’s population. We looked at differences within the population of Moffat County starting in 1980 where the population was 11,354. Population continued to grow at an average rate of 1.5% until 2000 where the population reached 13,182. Following 2000, population growth actually decreased by -0.3% by 2005, then rose 1.3% to 2010, fell by -1.3% in 2015, and has since increased by 1.7% (GIS.DOLA). We then divided the population into working age (20-64 years old) and aging (65+) and noticed that the working age portion of population increased from the 1980s to the 2010s but then has decreased since. On the other hand, the portion of aging population has been steadily increasing since 1980. According to the “Population Analysis”, in 1990, 8% of Moffat’s total population was aged 65-95. After the 20 years, in 2010, the percent of population 65 to 95 and over increased to 10.54% of the total
population. Looking at predictions within another 20 years, in 2030, the aging population is expected to account for 18% of Moffat’s total population. (DOLA). Based off of these observations, we understand that aging population is increasingly shifting towards the retirement age being the dominant part of Moffat’s total population.

Continuing, we then looked at the base analysis of 2017. We found that the primary industries by percentage of total employment included agribusiness (9.90% of total employment), and mining/utilities (7.69%). Moffat mainly has Direct Basic Employment with 65.98% of employment being direct basic, with Indirect Basic Employment sitting at 6.57%, and Worker Local Resident Service Employee holding the other 27.45% of employment. Based off these numbers, it appears Moffat has the majority of its jobs selling to customers outside of the region, generating cash inflows due to the exports, creating drivers for the economy. Moffat’s multiplier—total employment divided by direct basic employment—is 1.52. The current employment sits at 6,338 with the primary industries including mining, utilities, and education. The most common industries include retail trade (13.1% of total employment), healthcare & social assistance (10.6% of total employment) and construction (9.6% of total employment) while the most specialized and highest paying industries are utilities with median yearly earnings of $79,797 and mining, quarrying, oil, gas extraction with median yearly earnings of $61,750 (DATA USA). Also, as the data from the “County Employment and Wages in Colorado” shows, the average weekly wage in Moffat County is $955. In Moffat county, the male average salary is $60,344, the female average salary is $43,072 and median household income sits at $53,664 which is below Colorado’s median income which is $62,520 (DATA USA).

Although in Moffat county mining and utilities are indirect infrastructure economies and the primary drivers, Moffat also obtains abundant agricultural resources/assets. In Moffat County,
there are two million acres of public land that can be cultivated. The current assessed value of the agricultural land in Moffat is $11.3 million or 3% of the total taxable valuation (DOLA). Because much of Moffat’s land is controlled by the Federal Government, Moffat receives Payments in Lieu of Taxes (PILTs) to counteract the loss of property taxes due to the Federal Lands not being taxable; however, in 2017 Colorado only received $26.6 million which is very low. In order for Moffat to generate revenue off these lands, the goal is not to earn money with property taxes, but rather to increase economic activity on these lands. By increasing economic activity, this will create more employment opportunities within the county, hopefully attracting more working aged people to offset the aging population being the dominant part of Moffat’s population.

**Resiliency**

Resiliency is defined as the ability for economies to recover from a recession, or the change in a firm’s production/employee production for systematic tragedies (Weiler). Colorado as a whole has proven to be particularly resilient throughout history compared to other states, and Moffat County appears to be no different. According to the state demographer, in 2001, before the Great Recession, Moffat County had a total of 6,282 jobs, 1,148 of these jobs were proprietors, and 5,134 were wage and salary jobs. Once the Great Recession hit in 2008 Moffat county had 7,152 total jobs, 1,234 of which were proprietors, and 5,918 of which were wage and salary positions. Comparatively another rural, non-metro county such as Montrose County which is similar in a number of ways including their main drivers within their economies consist of the coal, and utility production industries. In 2001 Montrose county had 20,524 total job, 13,836 wage and salary positions, and 6,688 proprietors. Once the recession hit Montrose County in 2008 they had a total of 24,497 jobs, 16,346 of which were wage and salary, while 8,151 were proprietors.
The most current information we have at the moment is from 2017 when Moffat consisted of 6,291 total job, consisting of 1,169 proprietors, and 5,122 total wage and salary positions. According to these numbers, Moffat County did not seem to be affected catastrophically by the recession of 2008, but instead began to decrease in employment, proprietors, and income in years following the recession as they struggled to bounce back. The most recent information about Montrose County is provided by the BEA for 2016, and states that the county consisted of 22,901 total job, 15,369 wage and salary positions, and 7,532 proprietors. Montrose and Moffat Counties have similar trends in retractions following the recession in 2016 and 2017, but not necessarily as the recession hit in 2008. We believe this to be largely contributed to the fact the non-metro counties tend to react less initially yet are far less resilient than metro counties. This leads us to the idea that Moffat, due to it being a non-metro county has a low resilience to systematic risks but can also be greatly affected by other risks that are unique to the area for one reason or the other. Moffat County is currently faced with the complex idiosyncratic problem of future job loss when the Unit 1 power plant is inevitably shut down.

The establishments, particularly the births and deaths of establishments in a region, throughout the time periods before, during, and after a recession are essential when analyzing the resiliency of the region. The BEA Establishment data states that from 2000-2001, the county of Moffat had a total of 49 establishment births, comprised primarily of retail trade, and 32 establishment deaths. Given that, we can conclude that the recession greatly affected aspiring companies in 2008, when the county had 44 establishment births that year and 44 deaths in the same year, resulting in a net change of 0 establishments. Following the recession in 2015, Moffat had 33 establishment births, which comprise primarily of retail trade, and 36 establishment deaths. Unfortunately, nonmetro counties such as Moffat, are at a disadvantage compared to
metro counties when it comes to resilience, which can be seen in Figure 3 (please see appendix). This is apparent because the wage and salary sector of a metro county such as Arapahoe suffered significant losses in 2008, increasing in total employment from 18,280 but losing 124 jobs in this sector, while increasing in a total of 18,404 proprietors. The increasing number of proprietors seems to be positively correlated with the resiliency of an area, leading us to believe that in smaller counties self-proprietorship should be strongly encouraged to increase the resilience of their economy.

In rural counties, particular industries have yet to be introduced, and therefore they lack the information required to partake in a risky project that may have been proven effective elsewhere. This is a particularly special case where a solution is required with the forthcoming closure of Unit 1. Moffat is in a position where they must attempt to replace the loss of their main driver with something else, whether or not they possess knowledge about its previous success. The loss of employment is going to have an immensely negative effect on the economy that can potentially lead hundreds of families out of the area. Luckily Moffat County has until 2025 to implement a solution to combat the massive loss of tax revenue this sector usually expects. After extensive research on the base analysis, we have concluded that the births of several establishments within the ranching and meat processing industries could be viable solutions for the future of the county, due to the vast amount of public grazing land available. We believe that grass fed beef and bison could potentially help prevent the county from entering a recession following the powerplant downsize before the imminent shut down in 2025.

The number of jobs per establishment on average can also be an indication of whether a particular region is resilient. The county of Moffat had an average of 17.66 jobs per establishment in 2008 yet fell to an average of 16.87 jobs per establishment by 2015. The
average per establishment is fairly low, which points to the fact that smaller business tends to be favored in the region; this is understandable for a rural county with a smaller population. Therefore, establishing many firms in order to satisfy each step of the meat production industry, as opposed to one large employer, diversifies their portfolio. This can help prevent mass job loss from a single firm closure, ultimately helping the resilience of the county’s economy as a whole.

Following the closing of unit 1, the following effects will cause the economy to suffer in many aspects in addition to the loss of employment and it is important to understand how Moffatt can recover. Craig station (comprised of 3 plants) makes up about 40% of property taxes within the entire county and with the closure of unit 1, this number will decrease to about 30% (DOLA). While a 10% loss may not seem detrimental, it is important to stress that taxable property will decrease by about $55,000,000 (DOLA). While the closure of this plant brings about problems regarding job loss, we must extend our focus on the corresponding problems of tax loss as well as its economic impact. According to Chris Akers, the bigger concern is the loss of taxes, as it is much more harmful for the economy. The loss in taxes will result in higher property taxes for other classifications, increasing the tax burden for the great people of Moffat County. Unfortunately, much of the grazeable land within Moffat county is owned by the Federal Government, and therefore are not subject to the property tax rates that land under private ownership are.

Our suggestion to solve this issue would be to attract firms in the agriculture sector to the region, in order to spur economic growth. Due to the fact that this land is Federally owned, no money would be made from the sale of the land. However, this land can be used for grazing, as well as other agricultural and manufacturing purposes. Allocating this land to increase
production will ultimately increase the revenue accumulated in the area, which is taxable income for Moffat County. Therefore, the increase in economic activity on the previously stagnant land, in terms of economic production, could be a potential solution to the sudden, catastrophic loss of property taxes. The large asset of 2 million acres of public grazeable land is a huge opportunity for Moffat County to increase not only more jobs to attract more people, but also spur economic activity.

**Implications**

Being the second largest county in Colorado in terms of land can be a major advantage for economics success. However, most of this land is public grazing land, and Moffat County only has a population of approximately 13,000. With that being said, it is crucial for this rural county to develop multiple methods of turning its economy around and prospering, even with the loss of a third of the Craig Station power plant units. Historically, rural counties have not bounced back nearly as well as urban counties, in terms of economic growth following a recession. Metro areas, on average, show great economic recovery and even prosperity after a recession. These statements can be proven when comparing Moffat County to regions in the Denver area (Metro vs Non-Metro Colorado). The non-rural front range of Colorado has outperformed the average rural county in Colorado primarily due to the substantial populations and proprietors / local businesses. Since the Great Recession, Moffat County has lost over 5% of their total jobs, as well as suffering from a population loss of 5.3% (Chris Akers’ Guest Presentation). However, recent factors generating their unfortunate economics events are forecasted to turn around, as the projected growth rate of Moffat County’s population is forecasted to growth 2.3% within the next decade (2017 Base Analysis All Counties). As more people enter this county, we hope that job growth will match or even exceed this small surge in
population. One of our main goals is to develop methods that will perceive Moffat County as a more ideal place to live and work, especially for a younger population by introducing more industries to the county, as well as tweaking the current thriving and failing industries.

According to the base analysis of Moffat County, the primary industries are utilities, regional services, and mining (which includes coal extraction). We believe that Moffat County can boost its agriculture industry by diversifying livestock and introducing more grazing for their 2 million acres of public land. This open space is begging for economic use, and agricultural diversification on top of more defined and specialized grazing methods can fulfill this emptiness. Furthermore, we believe that Moffat County can still maintain its mining industry while looking into and possibly implementing cleaner, more efficient methods of energy extraction and consumption – this will help the county stay up-to-date with today’s times. In fact, moving toward greener ways could even strengthen the county’s relationship with the distant Bank of the West, since their financial ties have been cut off due to negligent energy extraction and consumption methods. There are a number of possible solutions that will ease the economic burden of being a rural county in today’s times.

Our most solid suggestion is to use a large portion of the 2 million acres of public grazing land in order to diversify livestock and implement new animals and grazing methods. This includes grass-fed beef and bison, as well as putting the county’s immense cattle and sheep population to better use. In addition to this suggestion, we also propose tax cuts and subsidies for small businesses in Moffat County in order to incentivize economic growth within the county-this will keep money in Moffat’s economy. These subsidies only need to be temporary, until the economy can see growth again. With the closure of unit 1, there will be a labor supply in
Moffat’s economy, and repurposing these jobs in the right manner could be the difference between a thriving and failing economy.

Furthermore, the county’s manufacturing industry is forecasted to grow, since it has been on an increasing trend for a few years (Better City, 2016). Manufacturing is a basic, primarily export-oriented industry, and it has the potential to bring back a significant amount of these impending loss of wage back into the local economy. In addition to manufacturing, Moffat County is comprised of a great number of skilled laborers who have the ability to create small start-ups with entrepreneurship mindsets. With the help of business incubators, we can bring resources and people together to generate successful small business growth throughout the county. We highly recommend that anyone laid off from unit 1 of the plant seriously looks into starting their own small business before considering any other options. More small businesses, in addition to increased tourism, will create a demand for more restaurants, hotels, and other small businesses to thrive from local economic growth.

With that being said, we would like to stress the importance of tourism in Moffat County. Although it is a rural, non-metro county, there is one main attraction that brings roughly 30,000 visitors per year - Dinosaur National Monument (Better City, 2016). If we can attract more visitors to this area, then there will be more of a demand for local businesses to match this increased number of visitors. Biking, rafting, and hiking are huge incentives for visitors in this area, so outreach is crucial for bringing outside people to the county. We want to make the area look as inviting as we can. Our final proposal is a more outside-the-box approach - a minor suggestion: continue mining coal but sell the majority of this coal to other counties. This could possibly help maintain Moffat County’s coal industry, while generating revenue for the county, to which they can invest into more efficient energy extraction and consumption methods.
However, repurposing the plant would impose the great property tax load of 13% (the overall plant makes up 40% of the county’s taxable income, so a third of this is roughly 13%). Although the county would suffer from these taxes, there is a possibility of economic growth and perseverance, given that the other proposals and suggestions are implemented correctly to generate wealth back into Moffat County.

**Conclusion**

Moffat is a very rural county with lots of land (4,751 square miles), and a very small population of 13,043. It is characterized by its primary industries, in which the most common are retail trade (13.1% of total employment), healthcare & social assistance (10.6% of total employment), and construction (9.6% of total employment) while the most specialized and highest paying industries are utilities with median yearly earnings of $79,797 and mining, quarrying, oil, gas extraction with median yearly earnings of $61,750. The main economic drivers within the economy lay within the highest paying industries of utilities and mining.

The Moffat economy is currently facing a large-scale problem--the closing of Unit 1, their largest taxpayer. According to 2017 Annual Report from the Division of Property Taxation at DOLA, under "State Assessed Property Value for Public Utilities" Moffat's value is listed at $155,503,822--the 11th highest value of all Colorado counties and even larger than Larimer County. With the closing of the plant, tax revenue is expected to drop by approximately $55 million (35%). Although the closing of the power plant is going to significantly impact the economy, Moffat has much potential for new drivers and should take the closing as an opportunity to implement many small businesses by taking advantage of the 2 million acres of public land. We suggest that Moffat investigates promoting small businesses rather than large
businesses to diversify their employment portfolio and with small business, if a business shuts down, the economy will not feel the hit nearly as hard.

With so much grazeable land and such a small population, agriculture appears to be a great approach for Moffat to thrive economically. The main issue with agriculture though is that it is taxed at a lower rate than commercial and residential properties; the current assessed value of the agricultural land in Moffat is $11.3 million or 3% of the total taxable valuation. In addition to implementing more agriculture and grazing within the county, we also suggest promoting more tourism. Tourism has been on the rise since 2013, with 6,000 more visitors in 2013 than the previous year (Encyclopedia Staff, 2016). Moffat’s public lands attract tourism along with their attraction, Dinosaur National Monument, where people can see dinosaur fossils embedded within rocks. By increasing tourism within the county, lodging and retail industries can thrive and more jobs can be created within these industries which will attract more people to Moffat.

It is our hope that by increasing economic activity on the two million acres of public land, the Moffat economy can not only recover from the closing of Unit 1 but thrive. By diversifying their economic drivers, Moffat can become less dependent on coal-mining which may even improve their relationship with distant Bank of the West, since their financial ties have been cut off due to negligent energy extraction and consumption methods. Moffat has so much to offer and such great potential for economic growth. The closing of Unit 1 should be looked at as an opportunity for growth in new industries, rather than as a total loss for Moffat.
References


Chris Aker’s Guest Presentation


Metro vs Non-Metro Colorado

Weiler Class Notes


2017 Base Analysis All Counties
Appendix

Image 1

Image 2

Image
ASCSU Honor Pledge

"I have not given, received, or used any unauthorized assistance."