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## How Important is the PFD to Alaska's Economy?

📅 September 24, 2018 (<https://kingeconomicsgroup.com/how-important-is-the-pfd-to-alaskas-economy/>) 👤 [Ed King \(<https://kingeconomicsgroup.com/author/edwardking98/>\)](https://kingeconomicsgroup.com/author/edwardking98/)

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In about a week, a total of \$1 billion will be deposited into bank accounts across Alaska. Over 600,000 Alaskans will receive \$1,600 each to spend however they choose.

You will see just about every business in Alaska competing to capture a share of that bump in income. Clearly, the PFD has a positive impact on the economy.

So, as I was working on a forecast of Alaska's economy for next year, I needed to know how to adjust the forecast for the size of next year's PFD.

That lead me down a path of analyzing the data to try to tease out exactly how much the economy is impacted by the amount paid in dividends. The answer shocked me.

Being a good data scientist, I report my findings. Not because they confirm what I want to be true, but because they help us all understand what *is* true.

So, please allow me to make a nuanced point that will be taken out of context and blown out of proportion.

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# Bottom Line Up Front

The PFD has a large impact on the *participants* within the economy. But it doesn't actually impact the *economy* all that much.

As best I can tell, more than 90% of PFD distributions don't enter Alaska's economy at all. Most of that money gets put in college savings accounts, leaves on airplanes, goes to Amazon, or pays federal taxes.

As a result, the PFD doesn't impact as many jobs as you might think.

If that intrigues you, read on. If that infuriates you, head down to the comments and tell me why I'm wrong before understanding my argument.

## ISER Report

The reason this finding is shocking to me is due to a [2016 report by ISER](https://pubs.iseralaska.org/media/aabf43aa-c8f8-4cea-b529-f5d9a3518928/2016_03_30-ShortrunEconomicImpactsOfAlaskaFiscalOptions.pdf) ([https://pubs.iseralaska.org/media/aabf43aa-c8f8-4cea-b529-f5d9a3518928/2016\\_03\\_30-ShortrunEconomicImpactsOfAlaskaFiscalOptions.pdf](https://pubs.iseralaska.org/media/aabf43aa-c8f8-4cea-b529-f5d9a3518928/2016_03_30-ShortrunEconomicImpactsOfAlaskaFiscalOptions.pdf)).

That report claims that cutting \$100 million from PFD distributions directly results in about \$100 million in reduced income (obviously).

But it also claims there would be follow-on effects – the result of households having \$100 million less to spend.

The report pegs those secondary impacts at \$49 million in additional lost income and 892 lost jobs.

But, we [have to be careful](http://kingeconomicsgroup.com/understanding-economic-multipliers/) (<http://kingeconomicsgroup.com/understanding-economic-multipliers/>) when we talk about follow-on impacts (often called multiplier effects).

## What the Data Say

Rather than using a model to predict what may happen in the future, I looked at what has actually happened in the past.

Since the PFD payments fluctuate every year, and since we have actual experiences of cutting the dividend in our data, we can see if these projections are consistent with historical results.

To assess the impacts, I used regression tools to test if [PFD distributions](https://pfd.alaska.gov/Division-Info/Summary-of-Applications-and-Payments) (<https://pfd.alaska.gov/Division-Info/Summary-of-Applications-and-Payments>) have been reliable predictors of the [State's job count](http://live.laborstats.alaska.gov/labforce/labdataall.cfm?s=2&a=0) (<http://live.laborstats.alaska.gov/labforce/labdataall.cfm?s=2&a=0>) over time. If changes in the PFD do create changes in jobs, we should see a relationship.

## THE RESULT

I was surprised to find that there is no statistically significant relationship between PFD payments and changes in jobs. Not even if I try to find one by lagging the time periods.

It is tempting to think there is a relationship. Just look at 2016. The PFD went from \$2,072 per person in 2015 to \$1,022 per person in 2016. At the same time, jobs fell from 340,132 down to 337,947.

That seems like evidence that the \$677 million reduction in PFD disbursements caused the 2,185 lost jobs (a rate of 323 jobs per \$100 million).

However, that year was an anomaly in the data. For example, look at the next year. The PFD disbursements *increased* by \$22 million in order to increase our PFD up to \$1,100 each. Yet, jobs *fell* by 1,141 that year.

That pattern exists in pretty much every year. The numbers are basically random. And there is no lagging adjustment that fixes the issue. **Changes in the PFD have no relationship to changes in the number of jobs in the data.** (note: you can find a spurious relationship if you don't control for time)

Year	Change in Employment	Change in PFD Distributions (millions)
1983	17,015	(294)
1984	12,595	(17)
1985	6,385	44
1986	(465)	91

1987	(4,186)	77
1988	3,926	55
1989	10,717	14
1990	11,353	31
1991	3,883	2
1992	8,703	(9)
1993	11,085	(134)
1994	6,762	(49)
1995	2,418	(27)
1996	4,363	28
1997	4,593	24
1998	4,978	38
1999	1,531	661
2000	1,792	141
2001	1,585	(60)
2002	1,849	(177)
2003	3,143	(249)
2004	5,920	(108)
2005	9,168	(46)
2006	5,731	153
2007	2,037	334
2008	3,706	283
2009	(493)	(460)
2010	1,624	2
2011	4,745	(58)
2012	1,313	(196)
2013	327	8
2014	784	630
2015	(453)	128
2016	(2,185)	(677)
2017	(1,141)	22

## Interpretation

This finding is a little strange. Theoretically, there should be a relationship. When people have more money, they spend more money. And when they shop more, and eat out more, and go to more movies, those businesses should need more people to handle the additional customers.

But that's not what the data shows.

## FINE TUNING

Sometimes, there is a relationship in the data that is just hard to find. If there are a lot of other variables that are jumping around, it creates "noise" that can drown out a "signal."

You can imagine why this could be a problem by doing a simple mental exercise. Think about the jobs that you would not expect to change if the PFD is bigger.

For example, oil fields and mines don't ramp up when the PFD is higher. Hospitals and State offices don't get busier when people have more money. A bigger PFD doesn't attract more tourists or commercial fishermen.

There are a lot of jobs in Alaska that are not reliant on consumer income levels. So, changes in those job levels could be masking a relationship. I tried to fine tune the data by excluding those non-impacted jobs to see if I could lock-on to a signal.

The sectors that are most likely to benefit from by a larger PFD are the "retail trade" and "leisure and hospitality" sectors. This is all the Wal-Marts, Costco's, Fred Myers', and other stores that have PFD sales. Plus all the bars, restaurants, movie theaters, and the like that may benefit from an increase in discretionary income.

But, when I run the regression on these sectors, they also come up empty. There is no statistically significant relationship between the number of jobs and the size of the PFD, even at the sub-sector level.

## HOW CAN THIS BE?

There are only two answers that satisfy this finding. Either people are not spending the money in Alaska, or the stores are absorbing the additional activity with existing staff.

We can test that first hypothesis with the GDP data from [BEA](https://www.bea.gov/) (<https://www.bea.gov/>).

### PFD Impact on GDP

In theory, if people have more money, they will buy more things. So, we should see a relationship between the amount of the PFD and the amount of things that are purchased at Alaskan stores.

The place we should be able to find the strongest relationship is in the retail sector in the fourth quarter of the year. People get their PFD in October and go spend it before Christmas.

So, how much additional economic activity does \$100 million in PFD distributions generate?

The data suggests the answer is somewhere between -\$2 million and \$13 million. Because that range includes zero, we can't say for sure that is has any impact on the economy at all.

But my intuition should say it does. If we ignore the fact that the relationship is too weak to conclude it is not random, the data suggests that about 8% of the PFD distributions end up in our Alaskan businesses.

### Then where are the jobs?

I have an untestable theory about why we see theoretical jobs, but not actual ones.

If you've ever tried to shop at Fred Myer's during the first week of October, you probably stood in line for longer than usual.

What that implies is that there is enough additional work for more cashiers. But, the additional workload falls on the current employees.

Because the surge in business is temporary, it doesn't result in a hiring more people. It creates enough work for more people (so the multiplier assigns more jobs to pick up the additional work). But it doesn't translate to more jobs.

## Where are the Multiplier Effects?

As best as I can tell, more than 90% of the PFD payments find their way out of the State before making a first pass through the economy. They go toward vacations, are saved in college funds, get spent online, or any of several other things.

The multiplier approach doesn't pick this up.

When you use an IMPLAN model, it assumes that people increase their spending proportionally with their current spending. So, a 5% increase in income would translate to a 5% increase in food, gas, rent, hospital bills, etc.

In reality, people don't buy 5% more food every month with their PFD. They spend that money on something their monthly budget doesn't allow them to afford.

And what that thing is depends on how much an extra \$1,000 means to your life.

If you have an income of \$1,000 per month, then adding another \$1,000 check in October means a lot. It's like getting another month's wages. Maybe this means you can afford to stock the freezer to get through the winter.

If you have an income of \$4,000 per month, then adding another \$1,000 check in October is like getting an extra week's wages. Maybe this means you can afford to go out to eat a few more times per month, or pay off that credit card.

If your income is more like \$14,000 per month, it probably just gets washed into your regular spending patterns.

Thinking about that for a moment, you can see why we don't see as big of an economic impact as we think we should. It's only the lower-income brackets that are likely to spend this money locally. The middle and upper income brackets are likely to use it in some other way.

## Economic Impact of the PFD

Regardless of how you spend your PFD, the things you do with it improve your quality of life.

For some people, that might be filling their oil tank for the winter or sending their kid to a program they couldn't otherwise afford. For others, it means a new TV, or a trip to Hawaii.

So, when you receive a smaller PFD, it *absolutely* has an adverse impact on you. It takes away the thing you would have spent the money on.

But, what you do with your PFD does have different impacts on the economy, depending on what you do with it. If you spend it locally, it increases the number of jobs the economy can support. If you spend it on a plane ticket, it doesn't.

The data suggests that most of the money is not spent locally.

## WRAP-UP

More than 90% of the money that is deposited into our bank accounts next week, will never find its way into Alaska's economy. This is because Alaskan's spend so much of our discretionary income out of State (maybe **you** don't, but "we" do).

As a result, those hypothetical job losses from cutting the PFD probably don't exist. However, the ISER report is correct about income.

Of all the tax proposals, a head tax ([PFD reduction](http://kingeconomicsgroup.com/yes-pfd-reductions-are-tax-increases/)) (<http://kingeconomicsgroup.com/yes-pfd-reductions-are-tax-increases/>) does have the largest adverse impact on the *individuals* within the economy. This is true because it falls exclusively on the shoulders of Alaskans, whereas other taxes are at least partially borne by non-residents.

And, a PFD cut is the *most likely* tax to have flow through impacts on the economy (even if we can't find them). That's because it takes the most money away from the people most likely to spend it locally.

None of this says anything about whether or not we *should* cut the PFD. That's a completely [different conversation](http://kingeconomicsgroup.com/alaskas-pfd-handout-or-income/) (<http://kingeconomicsgroup.com/alaskas-pfd-handout-or-income/>).

All I am pointing out is that if you view the purpose of the PFD as a way to stimulate the economy, it doesn't work. Even if our theoretical models say it should.

### Afterward


*\*\*\*Note: After publishing this article, I have been asked a couple questions that are worth clarifying.*


*First, it is true that credit card payments could be paying off things that were purchased in Alaska. However, the impact of such a technicality would not change the finding. If people put money on a credit card in anticipation of the PFD, those purchases would still show up in GDP. They would just show up sooner.*


*I did check to see if such a "reverse lag" exists. It doesn't. What is more likely is that the PFD simply frees up credit faster than a budget would otherwise allow. If that free credit then gets utilized, it would have the exact same impact on the data as just spending the PFD directly. The question of credit does not change the outcome. Or, more precisely, the impacts of credit are already captured in the finding. For that reason, I removed the reference to credit cards to avoid confusion.*

*Second, it is possible that businesses hire part-time employees to work through the surge in demand. If so, it would be difficult to find in the data. More sophisticated statistical tools than those I used here could locate the relationship. However, be aware that as you insert more controls on data, the interpretation becomes more constricted. Relationships that are located this way have decreasing relevance in the broader picture. You aren't going to move a rock and discover an elephant.*

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## 2 THOUGHTS ON "HOW IMPORTANT IS THE PFD TO ALASKA'S ECONOMY?"

John Jensen says:

**October 2, 2018 at 3:12 pm** (<https://kingeconomicsgroup.com/how-important-is-the-pfd-to-alaskas-economy/#comment-118>)

I think your results will be used by some influential people like legislators to argue against the PFD. Some of them think of the PFD as "welfare" rather than a dividend from our commonly owned natural resources. Some think that people migrate to Alaska simply to get the PFD so they view the PFD as a net negative.

No matter how we slice it, a reduction in the PFD is a cut to Alaskans' gross income and has no effect on the many non-resident workers in Alaska who often make a lot more money than most Alaskans. It has negative effects on Alaskans only.

I do not care a bit if the PFD does not directly increase jobs in Alaska. I do appreciate that my Alaskan grandchildren can use the dividend to save to help pay for a college education in Alaska and I am happy that the PFD does lift only too many Alaskans out of technical poverty. Low income people need it the most. Where might we have spent the PFD? Paying cash for new capitol near Wasilla? You may remember that that was a proposal from a would be governor.

[REPLY](#)

Ed King says:

**October 5, 2018 at 8:02 am** (<https://kingeconomicsgroup.com/how-important-is-the-pfd-to-alaskas-economy/#comment-129>)

Thanks for your comment John. This is certainly a touchy subject. Hopefully we can all have a rational and informed conversation about it.

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