

# Child and Family Poverty in Saskatchewan: 2019 Report



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**Acknowledgements:** We thank Campaign 2000 for providing data for this report.

**Campaign 2000:** Campaign 2000 is a non-partisan, cross-Canada coalition of over 120 national, provincial and community organizations, committed to working together to end child and family poverty in Canada. Campaign 2000 coordinated the preparation of the 2017 national and provincial poverty report cards. These can be viewed and downloaded at the web site [www.campaign2000.ca](http://www.campaign2000.ca).

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Suggested Citation: G. Hunter & M. Sanchez (2020). *Child and Family Poverty in Saskatchewan: 2017*. Regina: Social Policy Research Centre, University of Regina.

**Important Note - Data sources for this report.** Data in this report come primarily from Statistics Canada, *Annual Income Estimates for Census Families Individuals and Seniors* (T1 Family File, Final Estimates, 2017). Significant changes have occurred requiring the procurement of custom tabulations from Statistics Canada to produce the data in this report.

In the *Annual Income Estimates for Census Families* data set, Canadians are measured by something referred to as the Census Family Low Income Measure (CFLIM). According to Statistics Canada, the changes to the income measure aligns the methodology used by other international bodies such as the UN and the OECD. Statistics Canada advises that this measure does not include unrelated individuals sharing rent or grandparents living with the family. This measure counts the adjusted family size (square root) and then (for example a family of four), includes four individual counts with that adjusted family size median income.

Statistics Canada also produces another set of income data, the *Canadian Income Survey* (CIS) that survey calculates family income in a different manner and produces different data results. Concerning poverty, the CIS produces poverty numbers lower than the Census Family data files. In effect, Statistics Canada has two different definitions of families: Census Families is a narrower concept, what could be considered a 'nuclear family.' All Census Families are part of an Economic Family, however Economic Families may be comprised of more than just nuclear families. For example, an Economic Family could be an adult living in the home with their parents. If incomes of such a household are combined under the definition of an 'Economic family', naturally there would be a lower rate of low income than if only the income of the nuclear family is considered. See Statistics Canada link below:

<https://www12.statcan.gc.ca/census-recensement/2011/ref/dict/fam011-eng.cfm>

**Poverty or low income measure.** In 2018 the federal government of Canada adopted an official poverty measure, the Market Basket Measure (MBM). The authors of this report have serious concerns with the MBM and have provided a detailed analysis of those concerns as an Appendix B to this poverty report card. It was also attached to the poverty report card produced for 2018. Briefly, the MBM is a political measure of poverty created at the behest of the various provincial Ministers of Social Services across Canada which diminishes the incidence and depth of poverty in Canada. The political nature of the MBM, the statistical ‘games’ that have been employed to fix poverty at a level desired by Social Service Ministries, and the nature and the quantity of the items employed to produce the MBM is discussed. While reading that supplement ask yourself the level of seriousness employed to answer the empirically vexing scientific questions that went into the development of the MBM; for example the quantity and frequency of underwear purchased per child per year.

In this report we use the Census Family Low-Income Measure After-Tax or CFLIM. This measure of relative poverty uses a poverty level cut-off of one half of the median income adjusted for each family size. Any person in a household with income less than the LIM income levels shown in Table 1 is considered to be in poverty. While these LIM cut-offs are not sensitive to differing regional costs, they provide a standard measure of low income or poverty, making it possible to compare poverty across Canada and internationally.

<b>TABLE 1 Canada LIM-AT Low Income Cut-Offs 2017 constant dollars</b>	
<b>Household size</b>	<b>2017 After-tax income</b>
<b>1 person</b>	\$ 23,513
<b>2 persons</b>	\$ 33,252
<b>3 persons</b>	\$ 40,726
<b>4 persons</b>	\$ 47,026
<b>5 persons</b>	\$ 52,577
<b>6 persons</b>	\$ 57,595
<b>7 persons</b>	\$ 62,210
<b>8 persons</b>	\$ 66,505
<b>9 persons</b>	\$ 70,539
<b>10 persons</b>	\$ 74,355

Note: To convert to other household sizes, multiply the value for a "1 person household" by the square root of the desired household size. **Source:** Statistics Canada. Table 11-10-0232-01 Low income measure (LIM) thresholds by income source and household size.

## Saskatchewan Child Poverty for the year 2017.

The 2017 data represents the latest available from Statistics Canada to write this report. In 2017, there were 140,990 families in Saskatchewan with children below the age of 18, comprised of 275,790 children. What is the poverty rate among those children below the age of 18 in the province? How does Saskatchewan's child poverty rate compare to Canada's rate?

For 2017 there were 72,260 or 26.2% of Saskatchewan children who would be considered poor using the United Nations and OECD definitions of poverty (one half, or 50%, of the median income). The rate for Canada for 2017 was 18.6%. The province is well above the average for Canada, and ranks third highest behind the Territory of Nunavut at 31.2% and the province of Manitoba at 27.9%.

As mentioned in the previous poverty report, beginning in 2007 the province's commodity-driven economy really began to flourish. Not only was the growing petroleum industry realizing windfall profits from the rise in oil prices but also the demand for potash and grain had skyrocketed as well. The province had experienced tremendous proceeds for those resources. However the volatility of fluctuating resource revenues eventually returned and in 2017-2019 the governing Saskatchewan Party has experienced strong opposition to its decision to emphasize austerity in certain ministries while running large deficit budgets. During the period of unprecedented growth and profits voices urging prudent allocation of the revenues were expressed. Cautionary advice such as *Selling the Family Silver: Oil and Gas Royalties, Corporate Profits, and the Disregarded Public*<sup>1</sup> were published during this time and subsequently ignored. As early as our *November 2006 Report Card on Child Poverty in Saskatchewan*, we wrote:

"How do we pay for increased expenditures for poverty programs? The provincial government expenditures for public service and wealth redistribution as a proportion of its GDP was the third lowest of all ten provinces during 2002/03, with only Alberta and Ontario having lower expenditures.<sup>2</sup> The current high oil prices and their windfall profits present the opportunity to share the prosperity with the poorest. Rather than following the current trajectory of reducing royalty rates, the government of Saskatchewan could increase them with the aim of bettering the lives of the poor. The time to do so is now, before an economic recession produces a downturn in public revenues."

During the period of growth the housing costs in both of Saskatchewan's largest cities doubled. As a snapshot of the times "Between 2007 and 2008, Saskatoon's housing prices increased by 51.7%, the largest increase in the country."<sup>3</sup> The city of Regina experienced a rental vacancy rate of 0.8%<sup>4</sup> during 2009-10. Throughout the same period of windfall oil revenue profits the nation of Norway managed to build a trillion-dollar sovereign wealth fund with its oil/gas revenues.

The question of how economic benefits during a period of rapid economic growth in a region such as the province of Saskatchewan were distributed among all the population, was a question that remained

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<sup>1</sup> Warnock, John. *Selling the Family Silver: Oil and Gas Royalties, Corporate Profits, and the Disregarded Public*. Canadian Centre for Policy Alternatives. November 2006.

<sup>2</sup> E. Weir. (2004). *Saskatchewan at a Crossroads: Fiscal Policy and Social Democratic Politics*. Canadian Centre for Policy Alternatives. <<https://www.policyalternatives.ca/publications/reports/saskatchewan-crossroads> >

<sup>3</sup> Saskatoon Community Plan on Housing and Homelessness 2011-2014, *Insightrix Research Inc*. March 2011.

<sup>4</sup> Rental Market Report. *Canada Mortgage and Housing Corporation*. Saskatchewan Highlights, Spring 2010

unanswered. Deciding to answer that question, income data for Saskatchewan from the height of the economic boom in 2009, to the first post boom year of 2015 has therefore been analyzed by the authors of this report. What we ended with, was detailed empirical data about the distribution of income inequality among all people in the province. The findings of that analysis is attached to this report as a document titled Appendix A: *Frenzied Non-Renewable Resource Extraction in Saskatchewan During the Boom Where Did the Economic Benefits Settle?* We believe that readers will be very interested in examining for themselves the income outcomes among the population during a period of rapid economic growth.

As mentioned in the introduction, the poverty line in this report is derived from the Statistics Canada, *Annual Income Estimates for Census Families and Individuals Final Estimates 2016* data file. The new Census Family Low Income Measure (CFLIM-AT) is a low income measure based on the concept of one-half (50%) of the median income level after tax. The data is adjusted for differences in family sizes. Statistics Canada has reverted to the more common way of adjusting family size; dividing family income by the square root of the number of members in a family. Previously, Statistics Canada had applied a different method of assigning a ‘weight’ to different family members. However Statistics Canada is now using the adjusted family size and then calculating each member of the family as one unit to calculate the median income. In clear language, if a family of 4 has an income of \$50,000, then it would be divided by the square root of 4, which is 2 resulting in \$25,000. In calculating the overall median income this family would contribute 4 incomes of \$25,000 in the calculation of the overall median incomes for the different family sizes.<sup>5</sup> According to the author of that report, “Changing the methodology for calculating the T1FF CFLIM makes this LIM concept more comparable with those from other Statistics Canada sources and from international sources.”

The following table lists the Saskatchewan child poverty rate for all children 0-17 using the updated Statistics Canada CFLIM measure. The first row contains the counts or number of children, and the bottom row represents those counts as a percentage of children in poverty out of all children in the province ages 0-17:

TABLE 2 Child Poverty Count and Percentage, Saskatchewan 2008 - 2017										
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Count</b>	73030	71720	71420	70740	71830	71700	72200	72750	72850	72260
<b>Percentage</b>	29.9	29.1	28.7	28	28	27.7	27.5	27.1	26.7	26.2

Table 2 shows that for the decade 2008-2017 every year more than a quarter of Saskatchewan children lived below the poverty line demonstrating that during a period of growth in the Saskatchewan economy ending in 2014-15, little if any of the economic benefits reached the poorest in the province. More on this analysis is contained in Appendix A: *Frenzied Non-Renewable Resource Extraction in Saskatchewan During the Boom Where Did the Economic Benefits Settle?* The document is attached as a supplement to this report card.

<sup>5</sup> Pinard, Dominique. “Methodology Changes: Census Family Low Income Measure Based on the T1 Family File” *Statistics Canada: Income Research Paper Series*. April 5, 2018.

The story can be taken further. We can examine poverty rates among children during their most important developmental stage, ages between 0-6.

<b>TABLE 3 Child Poverty Count and Percentage, All Children Age 0-6</b>	
<b>Number of children below poverty line</b>	<b>Percentage of children below poverty line</b>
27,300	37.8

Table 3 reveals that 37.8 % of children living below the poverty line in Saskatchewan are between 0 and 6 years of age.

Although we always hear from government and corporate sectors that the best welfare programme is a job, the numbers do not support that crass slogan. The fact that without social spending the precarious situation of children in Saskatchewan would be much worse is an indication that incomes derived from the labor market are insufficient for many working families. The table below provides the counts and percentage of child poverty among children 0-17 in Saskatchewan from only *Market Income* (wages and salaries only), before social spending:

<b>TABLE 4 Child Poverty &amp; Market Income Children 0-17 &amp; Children 0-6 Saskatchewan - 2016 &amp; 2017</b>		
<b>Children 0-17</b>	Number of children below poverty line	Percentage of children below poverty line
	2016 (100,470)	2016 (36.8%)
	<b>2017 (106,960)</b>	<b>2017 (38.8%)</b>
<b>Children 0-6</b>	Number of children below poverty line	Percentage of children below poverty line
	2016 (37,530)	2016 (39.7%)
	<b>2017 (38,080)</b>	<b>2017 (40.0%)</b>

Table 4 also shows that almost 40% of Saskatchewan children would have been poor without social spending in 2017.

<b>TABLE 5 Child Poverty Before and After Government Program Spending</b>	
Child Poverty Before Government Programs (labour market poverty)	Child Poverty After Government Program Spending
38.80%	26.20%

Table 5 reiterates the percentage of poor children from the market economy. In 2017, 13% of children escaped poverty due to government transfers.

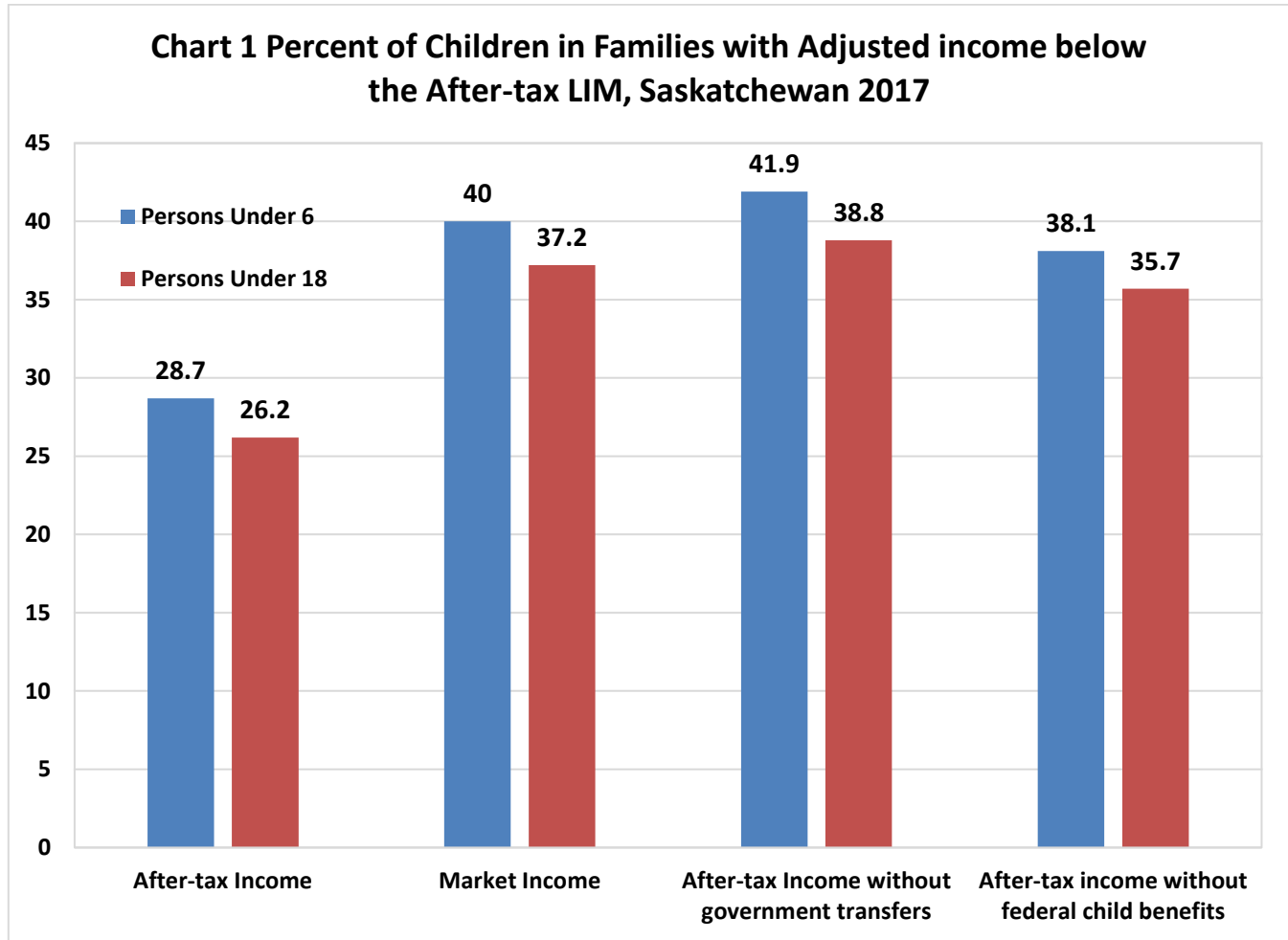


Chart 1 shows the impact of the Federal Child Benefits on child poverty rate in Saskatchewan. The After-tax income columns show the current child poverty rate in Saskatchewan. The After-tax income without federal child benefits columns show the child poverty rates without Federal Child Benefits. That is to say 9.5% of children receiving these benefits were lifted from the poverty line.

Government social programs play an important role in mitigating poverty through transfers in the form of child tax benefits, tax credits, and social assistance. Responsible taxation, including the wealthy and corporations would go a long way in remedying the large disparity of distribution of income in Saskatchewan. There is a need to develop such a system.

Tables 7 and 8, on the following page, illustrate that although the Saskatchewan personal income tax rate appears progressive with higher income earners being taxed at higher rates in reality the effective tax rate is much lower. Table 7 shows that those earning over \$202,808 are to be taxed at a rate 47.75%. Table 8 shows that those earning over \$ 202,808 (95<sup>th</sup> percentile) in reality paid 26.8% in taxes.

<b>TABLE 7 Saskatchewan Statutory Federal and Provincial Income Tax Rates 2017</b>				
2017 Taxable Income	2017 Marginal Tax Rates			
	Other Income	Capital Gains	Canadian Dividends	
			Eligible	Non-Eligible
first \$45,225	25.75%	12.88%	-0.03%	13.88%
over \$45,225 up to \$45,916	27.75%	13.88%	2.73%	16.22%
over \$45,916 up to \$91,831	33.25%	16.63%	10.32%	22.65%
over \$91,831 up to \$129,214	38.75%	19.38%	17.91%	29.09%
over \$129,214 up to \$142,353	40.75%	20.38%	20.67%	31.43%
over \$142,353 up to \$202,800	43.75%	21.88%	24.81%	34.94%
over \$202,800	47.75%	23.88%	30.33%	39.62%

Source: <https://www.taxtips.ca/priortaxrates/tax-rates-2016-2017/sk.htm>

<b>TABLE 8 Saskatchewan Effective Federal and Provincial Income Tax and Federal Payroll Tax Rates</b>	
	<b>Percent</b>
Mean effective rate	11.7
5th percentile rate	0
25th percentile rate	1.4
50th percentile rate	11.1
75th percentile rate	20.4
95th percentile rate	26.8

Source: <https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1110005401#timeframe>

Saskatchewan's current (2018) corporate income tax rate is much lower than the personal income tax rate. The lower rate of Saskatchewan income tax is 2%, using the Saskatchewan business limit of \$600,000. The higher rate of Saskatchewan income tax is 12%.

## Poverty Continues in Saskatchewan

From 2004 to 2014, Saskatchewan experienced ten years of exceptionally strong economic growth. Employment and incomes grew but more so did corporate incomes from profits derived from non-renewable resources. Were the benefits to the poor and working people in Saskatchewan greatly improved? The province is only behind Nunavut and Manitoba child poverty levels. The Indigenous peoples, for the most part, saw the royalties derived from the resources extracted from their traditional lands leave without benefit to them. The cost of living increased, especially for home ownership along with the price of rents. Was it all worth it? See the attached Appendix B: *Frenzied Non-Renewable Resource Extraction in Saskatchewan During the Boom Where Did the Economic Benefits Settle?*



The National Report Card, *2020: Setting the Stage for a Poverty-Free Canada*, lists a number of suggestions put forward by the national committee to address child poverty. The authors of this report would suggest that rather than attempting to address poverty, a different approach should be considered. Rather than poverty, the focus should be on income inequality. We'll mention here once more that the new official poverty line for Canada, the MBM, is designed to purposely eliminate growing income inequality from its methodology. That would entail a redirection from growth to sustainability and from needless production to environmental stewardship. Climate disruption is an issue that is only going to get worse and it needs to be addressed in a serious manner. Similarly, Canada needs to develop a humane programme of assisting the growing number of political, economic and climate disruption refugees. These are the two serious issues of our time, and they can only be realised if the issue of tremendous income inequality, on a global level, is considered.

# Appendix A

## Frenzied Non-Renewable Resource Extraction in Saskatchewan During the Boom

Where Did the Economic Benefits Settle?

1/9/2020

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Since the mid-1970s, nations with modern welfare states have adopted economic policy objectives in what is widely referred to as neoliberalism. Those policies developed in response to the crisis of profitability which emerged at that time. Summarizing those economic policies, Harman (qtd. in Ferguson et al) categorizes the intent of those initiatives as creating conditions amenable to the profitability of capitalism in response to the changing conditions of the capitalist economic order.<sup>6</sup> Regarding labour, the period of neoliberal economic policies can be parceled in to two phases.<sup>7</sup> During the first phase from the late 1970s until 2008, the primary commonality among states was the linkage of employment to social supports, emphasis on individual responsibility and conditional access to social programmes. During the second phase, in response to the global crisis of capitalism in 2008, states have used the crisis to enforce austerity measures to social programme spending. Straddling both phases of neoliberalism, the province of Saskatchewan, Canada experienced what has been widely described as an economic boom lasting from 2004 until 2014 due to high world prices for non-renewable resources including the province's potash and oil.

We examine incomes in the province of Saskatchewan, for the years 2009 and 2015.<sup>8</sup> This study looks specifically at income inequality within the province of Saskatchewan during a time when the oil and potash resource extraction industries were at their peak (2009) and 2015, the first year after the economic boom which had ended in 2014<sup>9</sup>. Statistics Canada characterized the province as starting a resource boom in 2002 and identified this event as Saskatchewan stepping into a new era of prosperity.<sup>10</sup> The same study claimed "As incomes have risen and population growth has resumed, Newfoundland and Labrador and Saskatchewan consumers have gone on a buying binge, leading provincial growth in retail, housing and auto sales." The authors of this report were skeptical back in 2008 incomes had risen for everyone. Were all consumers in Saskatchewan in a position to go on what Statistics Canada was to label as a 'buying binge?'"<sup>11</sup>

According to an almost breathless article in the national Globe and Mail newspaper, Saskatchewan's economic growth was a "miracle" benefiting not only the provincial coffers, working people, but the poor on welfare:

Beyond the impressive impact on the provincial books, the economic boom in Saskatchewan is translating into big gains for workers in the province. New Statistics Canada data based on income

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<sup>6</sup> Chris Harman, *Zombie Capitalism* (Chicago: Haymarket Books, 2009) quoted in Iain Ferguson, Vasilios Ioakimidis, & Michael Lavalette, *Global Social Work in a Political Context: Radical Perspectives* (University of Bristol: Policy Press, 2018), p. 24.

<sup>7</sup> Iain Ferguson, Vasilios Ioakimidis, & Michael Lavalette, *Global Social Work in a Political Context*, 26-27.

<sup>8</sup> These years were chosen to illustrate the growing disparity in income over time. The year 2015 is the latest income micro data set available from Statistics Canada, more importantly it provides data on incomes after the oil and potash extraction boom in Saskatchewan. Data from Statistics Canada Survey of Labour and Income Dynamics 2009 micro data tape are used for the income inequality analysis, representing a period when the boom was at its peak.

<sup>9</sup> Emily Eaton, "Inside Saskatchewan's Oil Economy". *Briarpatch Magazine*, January 2017.

<sup>10</sup> Statistics Canada, "Study: Resource boom in Saskatchewan and Newfoundland and Labrador." *The Daily*. Ottawa. May 15, 2008.

<sup>11</sup> Garson Hunter, Fiona Douglas, F. & Sarah Pedersen, "Will the Economic Boom Reduce Poverty in Saskatchewan?" *Canadian Centre for Policy Alternatives: Sask. Notes*. Volume 7: Issue 3, Aug 2008.

tax filings shows that average employment income in the province rose by 60 per cent from 2000 to 2010. This was the fastest growth rate of any province in Canada including Alberta.

The good times in Saskatchewan are fostering more wealth generation too. The amount of personal investment income declared by residents of Saskatchewan on their tax forms in 2010 was up by 93 per cent over 2000. The investment income growth rate was second only to Alberta among the 10 provinces across the country.

It is also interesting to note the impact on the province's most vulnerable population. While there are limitations to the depth of analysis from this data source, we do know that the number of persons in Saskatchewan claiming social assistance income dropped by 11.5 per cent from 2000 to 2010 compared to an 8.9 per cent rise across the country. At the same time, the average amount of income reported by social assistance recipients rose by 61 per cent – more than three times faster than the country as a whole.

It looks like the government is ensuring that at least some of the proceeds from the economic boom are bolstering the province's social safety net.<sup>12</sup>

It is difficult to examine the veracity about the claims that economic growth was affecting the provincial welfare rolls. The province of Saskatchewan does not make its welfare data readily available to the public. The province administers an array of overlapping welfare programme streams (SAP, TEA, SIS, SAID) therefore it's difficult to determine if recipients actually left welfare or were shifted to other welfare programmes. The article reports "average income" which is not generally perceived as that useful an income measure when examining trends across the spectrum of incomes. Income does not follow a normal distribution and it's not a parametric statistical measure. Income follows a highly skewed distribution, with most people clustering around the lower end of the income distribution, with the few higher income earners dramatically influencing the income distribution and subsequently the average population statistic. In other words the average statistic can be highly misleading if the data contains a few extreme values. It is possible for there to be an impressive rise in average incomes when in reality, for most people, their incomes remained relatively flat while most of the income growth went to the highest income earners. For that reason the more common and useful measure of income is the median income value (where 50% earn below and 50% earn above that statistical value).

In a similar vein of verbiage, a CBC news story from 2017 ran under the headline "Household incomes soared during Saskatoon's resource boom: census data."<sup>13</sup> Highlighting census data, gentrification of the Greystone Heights neighbourhood and the income increases among the wealthy neighbourhood of Arbor Creek, the article moved on to discuss luxury vehicles. Quoting the general manager of the luxury

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<sup>12</sup> David Campbell, "Economy Lab: Learning from the Saskatchewan miracle," *The Globe and Mail*, July 5, 2012 Updated April 30, 2018, national edition.

<sup>13</sup> Jennifer Quesnel, "Household incomes soared during Saskatoon's resource boom: census data," *CBC News*, September 19, 2017.

Maserati, Alfa Romeo and premium SUVs, we learned that previously everybody hid their wealth. But that situation had changed. The article does caution however, “Not everyone can afford a Maserati.” Our purpose in writing this article is to examine how the economic boom also affected those people not able to afford a Maserati.

Focusing on income distribution and inequality of income in the province, we highlight that for the poor and other marginalized people in the province, their position had not improved and in many ways had been made even more precarious due to rising housing costs and low rental vacancies. Examining the housing prices in the provincial capital city of Regina, the Association of Regina Realtors records the average price of a house sold was \$100,365 in 2002, which increased to \$311,235 in 2015.<sup>14</sup> That represents an astonishing 210% increase in the average price of a house. Have incomes increased to the level that consumers in Saskatchewan could embark upon a house buying binge, or was the binge restricted to those with higher incomes or buyers needing to carry a heavier mortgage debt load? For many, did the resource boom actually place them in a more precarious financial position due to the dramatic increase in housing costs?

Although the Statistics Canada report ignores renters, according to the fall 2002 Canadian Mortgage and Housing Corporation publication, “...Regina apartments will remain among the most affordable in Western Canada. CMHC’s latest rental market survey conducted in October 2001 found the average rent for a two bedroom suite in Regina to be \$568 per month, almost 30 per cent lower than average two bedroom in rent in Calgary, 13 per cent less than Edmonton and six per cent less than a two bedroom apartment rents in Winnipeg.”<sup>15</sup> According the CMNC, by 2015 the average two bedroom rental costs in the city of Regina for April 2015 was \$1,095.<sup>16</sup> This represents a 93% increase in rent during the period of economic boom. Strangely, the 2015 CMHC report headlined “Vacancy Rates and Average Rents Increase at Provincial Level.” Indeed, Regina’s rental vacancy rate for April 2015 had increased to 4.4 per cent, which was roughly double the vacancy rate of 2.2 per cent for April 2014. At the same time as vacancy rates were rising, rent costs were also rising in the city from \$1,053 in April 2014 for a 2 bedroom apartment to \$1,095. Is this how the neoclassical economic principle of the “law of price and demand” is supposed to function? Although CMC did mention the rise in vacancies was due to the “Oil Price Shock,” which must mean people left the province once the resource boom was over, the report did not explain how or why rents continued to increase across the province. Were the people who were renting going on the “buying binge” identified by Statistics Canada?

By applying three measures of inequality, the Gini Coefficient, the Theil Index, and the Sen Index to Income Distribution, this paper seeks to answer the question: What was the effect of the economic boom on income inequality and poverty in the Province of Saskatchewan?

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<sup>14</sup> “Annual Historical Statistics - MLS® Residential Total - Regina City and Region Yearly.” *Association of Regina Realtors*. <[http://www.reginarealtors.com/web/ARR/Market\\_Statistics/Historical\\_Stats/ARR/Market\\_Statistics/Historical\\_Stats.aspx?hkey=496b7bdc-428c-48fe-b864-dc5974960683](http://www.reginarealtors.com/web/ARR/Market_Statistics/Historical_Stats/ARR/Market_Statistics/Historical_Stats.aspx?hkey=496b7bdc-428c-48fe-b864-dc5974960683)>

<sup>15</sup> Canada Mortgage and Housing Corporation, “Forecast Summary.” Regina Fall 2002, p. 3.

<sup>16</sup> Canada Mortgage and Housing Corporation, “Housing Market Information: Rental Market Report. Saskatchewan Highlights” Spring 2015, p. 5.

There is, however, a limitation to using income alone to measure inequality: income variables only capture one aspect of wealth. If the ownership/possession of securities, savings, property holdings and vehicles, etc., is included in the analysis, then the inequality gap would be massive. While there is much to say about wealth inequality in Canada, that data is more difficult to access. The rich are not eager to divulge their holdings. This report examining income inequality comes with the caveat that the disparity in Canadian society between the wealthy and the rest of Canadians is much greater than that captured in the paper.

### **Economic Family Wages and Salaries and Measures of Income Inequality**

One means to examine income inequality is to study family incomes based only on wages and salaries. To do so we employ the Statistics Canada, Economic Family<sup>17</sup> Wages and Salaries<sup>18</sup> variable and parcel the variable out into income deciles, population income shares, income cut-offs, Gini coefficients and cumulative shares and inequality and income gaps measures. The reason for selecting those measures was based on their relationship of incomes to inequality:

Most of these measures are closely related as they consider (in somewhat different ways) the percentage of income going to different proportions (usually deciles, or 10% groupings) of the population. In addition, many of these indices arrive at a measure of inequality by comparing the *actual distribution* of income with a *hypothetical distribution* based on an ideal of equality. Ideal equality occurs, in terms of these measures, when each proportion of the population receives an equivalent share of the income (i.e., each decile receives 10% of the total income). The difference between this ideal and the actual distribution of incomes represents the level of inequality.<sup>19</sup> (italics in the original)

This study employs the same measures of inequality as those used within previous poverty and income disparity studies produced through the Social Policy Research Unit (SPR) at the University of Regina.<sup>20</sup>

The Wages and Salaries variable collected by Statistics Canada in its annual Survey of Labour and Income Dynamics (SLID) surveys can be thought of as income derived from the labour market. It is an indication of the level of income inequality that results from differences in labour remuneration, or the level of income inequality that derives from employment.

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<sup>17</sup>. Statistics Canada define an "Economic Family" as a group of individuals sharing a common dwelling unit who are related by blood, marriage (including common-law relationships) or adoption. An Economic Family can also be a single person.

<sup>18</sup>. "Wages and Salaries" is defined as the gross earnings from all jobs held as an employee, before payroll deductions such as income taxes, employment insurance contributions or pension plan contributions. Wages and salaries include the earnings of owners of incorporated businesses, although some amounts may instead be reported as investment income. Commission income received by salespersons as well as occasional earnings for baby-sitting, for delivering papers, for cleaning, etc. are included. Overtime pay is included. Military personnel living in barracks are not part of the target population in SLID, although they are included in Census data. In the 2015 *Canadian Income Survey* data set this variable is referred to as "Market Income".

<sup>19</sup> Gordon Ternowetsky, & Jill Thorn, (1991). "Work and Economic Insecurity: Saskatchewan in the 1980s. Working Paper Series; no. 6. "Social Policy Research Unit. University of Regina, p. 115.

<sup>20</sup>. All research reports produced by SPR beginning in the 1980s – 2000s are available for free download from: <https://ourspace.uregina.ca/handle/10294/787>

**Table 1: Income Distribution of Economic Family Wages and Salaries (Labour Market Income), Saskatchewan. 2009 and 2015**

Deciles	Upper Income Cut-off		Percent Income Share		Cumulative Percent	
	2009	2015	2009	2015	2009	2015
Lowest 10%	\$7,400	\$10,000	0.5%	0.5%	0.5%	0.5%
2 <sup>nd</sup> 10%	\$16,075	\$24,100	1.8%	2.1%	2.3%	2.6%
3 <sup>rd</sup> 10%	\$26,500	\$37,150	3.3%	3.7%	5.6%	6.3%
4 <sup>th</sup> 10%	\$39,050	\$50,000	4.9%	5.6%	10.5%	11.9%
5 <sup>th</sup> 10%	\$51,525	\$64,000	7.0%	7.0%	17.5%	18.9%
6 <sup>th</sup> 10%	\$65,800	\$81,000	8.8%	8.6%	26.3%	27.5%
7 <sup>th</sup> 10%	\$83,125	\$99,000	11.3%	11.1%	37.6%	38.6%
8 <sup>th</sup> 10%	\$106,075	126,000	14.1%	13.7%	51.7%	52.3%
9 <sup>th</sup> 10%	\$138,500	\$170,000	18.2%	18.1%	69.9%	70.4%
Highest 10%						
90%-95%	\$173,500	\$214,525	11.6%	11.3%	81.5%	81.7%
96%-99%	\$286,350	\$370,725	12.6%	12.9%	94.1%	94.6%
Top 1%	none <sup>21</sup>		5.9%	5.4%	100%	
(Gini coefficient)	0.463	0.448				
(Gini index)	46.3%	44.8%				

Source: Calculated by the authors using Statistics Canada *Survey of Labour and Income Dynamics 2009* micro data file and the *Canadian Income Survey 2015* micro data file.

### 1. Population Shares (Deciles)

Column 1 in Table 1 divides the economic family Wages and Salaries variable into 10 percent (decile) groupings, ordered from the poorest families to the most affluent families. The richest 10 per cent of the affluent families are further sub-divided into three groups: the 90-95<sup>th</sup> percentiles, the 96-99<sup>th</sup> percentiles, and the richest one per cent. The reason we sub-divide the richest 10 per cent decile is because the income within this group is widely spread. Sub-dividing also allows for a closer examination of the super rich within the top ten per cent of the income variable.

<sup>21</sup>. There is no upper income cut-off for the top one per cent.

## 2. Income Cut-offs

Column 2 shows the income cut-off amount for each decile and percentile of the Wages and Salaries variable. These values are the top income reported in each income decile. For example, in Table 1, the highest income in the bottom income decile (the poorest families) was \$7,400 in 2009. By 2015, the highest income for this group had only reached \$10,000, a difference of \$2,600. For the bottom half of the families (the income cut-off for the fifth decile), the family wage increased from \$51,525 in 2009 to \$64,000 in 2015. This is a difference of \$12,475. When this increase is compared to the increase gains at the top, we see that:

- The family wages of the 99th percentile (the one percent) grew from \$286,350 for 2009 to \$370,725 for 2015, a growth of \$84,375.
- Income cut-offs point to substantial changes in wage and salary inequality, with the richest Canadians (particularly the top one per cent) improving their position substantially when compared to the marginal or modest growth of most other Canadians.
- The bottom decile, representing the poorest families, derives little growth from the labour market.

The income cut-offs indicate substantial differences in the level of wages and salaries in Canada. *A large percentage of the population remains at the bottom of the income scale, while the most prosperous continue to strengthen their economic position.*

## 3. Income Shares

Column 3 indicates the share of income received by each of the income deciles. Looking at Table 1, we see that the bottom 10 percent of the population continues to hold less than 1 percent of all wages and salary income for 2009 (0.5%) and 2015 (0.5%), and that their percentage of income from wages and salaries is stagnant. For comparison, in 2009 the top income decile (i.e., the top 10%) received 30.1% of all wages and salary income. For 2015 this decile received 29.6%. In addition, we see a disturbing pattern within the per cent income shares among the two comparative years. The per cent income shares is fixed with slight variation. The pattern of large income disparity is deeply entrenched.

When looking at cumulative per cent and income share per cent for 2015, the 5.4% income share of wages and salaries of the top one per cent is just below the cumulative income of the bottom thirty per cent who only receive 6.3% of the wages and salaries. Put another way, the 3,995 economic families that comprise the top one per cent in Saskatchewan earn almost as much from wages and salaries than the bottom thirty per cent which comprise 130,632 economic families.

## 5. Gini Scores and Cumulative Income Shares

Another measure of inequality employed in SPR's previous research studies has been the Gini coefficient. Gini values can range from zero (perfect equality) to 1.00 (complete inequality). When each population decile has an equal share of the income, the Gini equals zero. If all of the income falls within one decile, there would be perfect inequality and the Gini would equal 1.00.



Each cumulative share of the population would receive an equivalent cumulative share of the income. The Gini coefficient can be calculated as follows:

$$G = \frac{1}{2\bar{Y} \cdot n \cdot (n-1)} \cdot \sum_{i \neq j}^n \sum_{j}^n |Y_i - Y_j|$$

where: (1)  $Y_i$  and  $Y_j$  are the incomes of the  $i$ th and  $j$ th family units

(2)  $\bar{Y}$  is the average income

(3)  $n$  is the number of family units

### Interpreting the Gini Values

Under a situation of perfect equality, the bottom 20% of all families would control 20% of income and the bottom 50% would control an equal 50% of the cumulative income. The Gini score depicts the size of the gap between this ideal and the actual cumulative distribution of income. A Gini coefficient measures inequality with a value between 0 and 1, where 0 corresponds with perfect equality (everyone has the same income) and 1 corresponds with perfect inequality (one gets all the income and everyone else has zero income). The Gini index is the Gini coefficient expressed in percentage form and is equal to the Gini coefficient multiplied by 100.

The Gini score indicates the size of the gap between the ideal and the actual cumulative distribution of incomes in the population; therefore, the larger the gap, the greater the inequality and the higher the value of the Gini. Using the Gini can help to quantify the effects of welfare and other income support programme spending on mitigating the inequality of the labour market (see Table 2 below). The Gini coefficient can also be used to indicate how the distribution of income has changed within a country over a period of time. Hence, it is possible to see if inequality is increasing or decreasing. However, it should be borne in mind that the Gini coefficient can be misleading when used to make political comparisons between large and small countries. Gini coefficient values usually range between 0.2 – 20% (low inequality) to values of 0.5 – 50% (high inequality).<sup>22</sup> Changes in income inequality take place very slowly. While most developed European nations tend to have Gini coefficients between 0.24 and 0.36, the United States has been above 0.4 for the last two decades, indicating greater income inequality in this nation which leads the neoliberal economic policy drive.

The Gini score in Saskatchewan for wages and salaries was 0.463 in 2009 and 0.448 in 2015. The level of income inequality through wages and salaries is high in the province of Saskatchewan and rivals the level of income inequality seen in the USA. Looking at salaries and wages in Saskatchewan, we see that

<sup>22</sup>. Abdul Rashid, (1998). "Family Income Inequality, 1975-1995" *Statistics Canada*. Catalogue no. 75-001-XPE, p. 14.

entrenched income inequality is a significant barrier to a more equal society concerned with social and economic justice.

### Total Family Income and Income Inequality in Canada

Table 2 below shows the Total Family Income<sup>23</sup> variable for 2009 and 2015. With this variable we can determine if government transfer payments to families and the income derived from investments have narrowed any employment income inequality generated by the market. In 2009, the lowest decile received 0.5% of its income share from wages and salaries (Table 1) and 1.6% of its income share from total income (Table 2). This situation does not change by 2015 when the poorest economic families still received just 0.5% of the wages and salaries income and 1.4% of the total economic family income. Social expenditures have an essential function in mitigating the worst discrepancies in income based just on the labour market. However, the amount of total income the bottom ten per cent received is still a deeply entrenched inequality. Similar to our findings using the Wages and Salaries variable, the top ten per cent, especially the top one per cent, get the greatest share of Canada's income. Increasing slightly from 2009 to 2015.

**Table 2: Total Income Distribution Saskatchewan. 2009 and 2015**

Deciles	Upper Income Cut-off		Percent Income Share		Cumulative Percent	
	2009	2015	2009	2015	2009	2015
Lowest 10%	\$17,225	\$19,750	1.6%	1.4%	1.6%	1.4%
2 <sup>nd</sup> 10%	\$24,450	\$31,650	2.9%	3.0%	4.5%	4.4%
3 <sup>rd</sup> 10%	\$32,975	\$43,425	4.1%	4.4%	8.6%	8.8%
4 <sup>th</sup> 10%	\$43,200	\$55,000	5.4%	5.7%	14.0%	14.4%
5 <sup>th</sup> 10%	\$55,000	\$68,400	7.2%	7.0%	21.2%	21.4%
6 <sup>th</sup> 10%	\$68,750	\$84,500	8.5%	8.9%	29.7%	30.3%
7 <sup>th</sup> 10%	\$85,400	\$103,275	11.0%	10.8%	40.7%	41.1%
8 <sup>th</sup> 10%	\$106,550	\$129,525	13.6%	13.4%	54.3%	54.5%
9 <sup>th</sup> 10%	\$138,775	\$170,075	17.3%	17.0%	71.6%	71.5%
Highest 10%						
90%-95%	\$170,875	\$214,500	10.9%	11.0%	82.5%	82.5%
96%-99%	\$280,550	\$345,000	11.8%	12.1%	94.3%	94.6%
Top 1%	none <sup>24</sup>		5.7%	5.4%	100%	
(Gini coefficient)	0.412	0.409				
(Gini index)	41.2%	40.9%				

Source: Calculated by the authors using Statistics Canada *Survey of Labour and Income Dynamics 2009* micro data file and the *Canadian Income Survey 2015* micro data file.

<sup>23</sup>. The Total Income variable includes all income gained by family members from investments, government transfer payments, retirement pensions, superannuation and annuities, and all other money income.

<sup>24</sup>. There is no upper income cut-off for the top one per cent.

Although a very useful measure with which to investigate inequality, the Gini Index has shortcomings:

The Gini coefficient is not entirely satisfactory. To see this, consider the criteria that make a good measure of income inequality, namely:<sup>25</sup>

- *Mean independence.* This means that if all incomes were doubled, the measure would not change. The Gini satisfies this.
- *Population size independence.* If the population were to change, the measure of inequality should not change, ceteris paribus. The Gini satisfies this too.
- *Symmetry.* If you and I swap incomes, there should be no change in the measure of inequality. The Gini satisfies this.
- *Pigou-Dalton Transfer sensitivity.* Under this criterion, the transfer of income from rich to poor reduces measured inequality. The Gini satisfies this too.

It is also desirable to have

- *Decomposability.* This means that inequality may be broken down by population groups or income sources or in other dimensions. The Gini index is not easily decomposable or additive across groups. That is, the total Gini of society is not equal to the sum of the Gini coefficients of its subgroups.
- *Statistical testability.* One should be able to test for the significance of changes in the index over time. This is less of a problem than it used to be because confidence intervals can typically be generated using bootstrap techniques.

The Gini Coefficient can not be decomposed into inequality within defined population subgroups (in our case the income deciles). However it would be useful to know the contribution of the different income deciles to income inequality. There is a measure of income inequality that allows us to measure this concept, the income inequality known as the Theil Index.

The Theil Index is "...a measure of inequality with unique properties that makes it a powerful instrument to produce data and to analyze patterns and dynamics of inequality."<sup>26</sup> The Theil Index can be written as:

$$T = \frac{1}{N} \sum_{i=1}^N \frac{y_i}{\bar{y}} \times \ln \left( \frac{y_i}{\bar{y}} \right)$$

Unlike the Gini coefficient, which has a fixed limit between 0 and 1, the limit of the Theil Index depends on the number and size of groups, and so the level is not always comparable across contexts. Rather, it's most useful in showing changes over time at whatever level of aggregation is chosen, for this study the chosen measure is median incomes across population deciles.

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<sup>25</sup> World Bank, "Chapter 6." *Introduction to Poverty Analysis*. World Bank Institute. August 2005, 98.

<sup>26</sup> Pedro Conceição, & Pedro Ferreira, "The Young Person's Guide to the Theil Index: Suggesting Intuitive Interpretations and Exploring Analytical Applications." *UTIP Working Paper Number 14*, May 14, 2000, 1.

Commenting on the interest in income inequality, Conceição and Ferreira note that most of the time a single summary measure of inequality, the Gini Coefficient is used to describe this concept. They argue that the Gini Coefficient “...has only limited success in its ability to generate the amount and type of data required to analyze the complex patterns and dynamics of inequality within and across countries.”<sup>27</sup> To facilitate an understanding of the methodology of this measure to the general reader, a worked example of the calculation of a Theil element is included at the end of this report.

Examining income in Saskatchewan using Total Income, the Theil Index provides the following information:

**Table 3. Decomposing the Dynamics of Inequality in Saskatchewan – Theil Index**

Deciles	Median Incomes		Income Share		Contribution to Inequality	
	2009	2015	2009	2015	2009	2015
Lowest 10%	\$11,325	\$13,708	.21	.20	-.03	-.03
2 <sup>nd</sup> 10%	\$20,250	\$25,300	.37	.37	-.04	-.04
3 <sup>rd</sup> 10%	\$29,200	\$37,450	.53	.55	-.03	-.03
4 <sup>th</sup> 10%	\$38,300	\$49,000	.70	.72	-.03	-.02
5 <sup>th</sup> 10%	\$50,000	\$61,475	.91	.90	-.01	-.01
6 <sup>th</sup> 10%	\$60,475	\$76,425	1.10	1.12	.01	.01
7 <sup>th</sup> 10%	\$76,900	\$94,050	1.40	1.38	.05	.04
8 <sup>th</sup> 10%	\$95,750	\$114,500	1.75	1.67	.10	.09
9 <sup>th</sup> 10%	\$121,400	\$146,675	2.21	2.14	.17	.16
Highest 10%						
90%-95%	\$153,825	\$190,675	2.80	2.79	.14	.14
96%-99%	\$196,200	\$258,075	3.57	3.77	.18	.20
Top 1%	\$365,350	\$444,925	6.64	6.50	.13	.12
	(total for top 10%)		13.01	13.06	.45	.46
<b>Theil Index</b>	0.640808	0.633672				
<b>Overall Median</b>	\$55,000	\$68,400				

Source: Calculated by the authors using Statistics Canada *Survey of Labour and Income Dynamics 2009* micro data file and the *Canadian Income Survey 2015* micro data file.

When examining *Income Share*, any figure greater than one means that an *Income Decile* was above the overall median income for Saskatchewan and any figure less than one means that an *Income Decile* was below the average median income. Any income decile above the median provincial income boosts income inequality and any income decile below the median income reduces income inequality. For example, looking at “Column 3; Income Share” the Lowest 10% median income was approximately one-fifth (.20 or

<sup>27</sup> Pedro Conceição & Pedro Ferreira, “The Young Person’s Guide to the Theil Index: Suggesting Intuitive Interpretations and Exploring Analytical Applications,” *UTIP Working Paper Number 14*, February 29, 2000.

20%) of the overall median income for Saskatchewan for 2009 and 2015 (any figure less one means the income decile was below the average median income and any figure greater than one means the income decile was above the average median income). The Highest 10% median income was just over 13 times the overall median income for Saskatchewan for 2009 and for 2015. The Top 1% alone was almost 7 times the overall median income for Saskatchewan for 2009 and for 2015. The Contribution to Inequality (Column 4) is the contribution of each income decile to the between income decile inequality measure of the Theil's T statistic (the Theil Index is always positive, although individual contributions to the Theil Index may be negative or positive). Any income decile with a median income that is smaller than the overall median income will have a negative Theil element. Conversely, an income decile with a median income greater than the overall median income will have a positive Theil element. The Theil Index reveals virtually no shift in income inequality in Saskatchewan after the end of the economic boom in the province compared to peak period of high resource extraction (inflation does not affect the Theil Index).

To analyze the situation of the poor in more detail the authors also examined the data using the generalized poverty gap measure known as the Sen Index. This index integrates two simpler indexes, the incidence (headcount) ratio and the poverty gap, and creates a new poverty index with the advantage "... [T]he Sen Index is said to include the three I's of poverty: Incidence, Intensity and Inequality."<sup>28</sup> Most poverty reports will list the number of poor, some will include the average gap of the poor from the respective poverty line cut-offs, while the Sen Index measures the degree of income inequality only among the poor. The formula for the index is:

$$S = HC[PG + (1 - PG)Gp]$$

The index is a combination of three characteristics:

- a) The head-count ratio *HC*
- b) The poverty gap *PG*
- c) The Gini coefficient *Gp*, a measure of the distribution of incomes among the poor.

The mean income of the poor is a regularly reported measure as is the incidence (referred to as headcount ratio) of those who are poor. A few include the depth of poverty relative to the poverty line cut-offs. What is particular to the Sen Index is that the Gini index (which is calculated to produce the Sen Index), is only calculated among those who are poor thereby excluding the rest of the population. All incomes above the poverty line are omitted from the calculation. In doing so, the Sen Index has a number of desirable properties including: zero as the lower limit, headcount ratio as the upper limit, it's scale invariant, is not translation invariant, and the index satisfies the principle of transfer.

The weakness of the incidence (headcount) measure is that it does not obey the principle of transfer – the measure does not vary when the same total income is redistributed among individuals, if nobody crosses

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<sup>28</sup>. Lorenzo Giovanni Bellù, & Paolo Liberati, "Impacts of Policies on Poverty: Generalized Poverty Gap Measures." *Food and Agriculture Organization of the United Nations*. 2005, FAO, 2.

the poverty line.<sup>29</sup> In such a situation, the number of poor would remain the same, which may lead the HC measure to function in a ‘perverse way’.<sup>30</sup> An example is if an extremely poor person has some of their income transferred to a person who is near the poverty line, and that transfer lifts that person out of poverty (regressive transfer), then the HC measure will indicate less poverty even though the poor person is even poorer. This form of transfer can be seen in social programmes that clawback benefits from poor who are not working and use those funds as an income transfer to those with low incomes. The late Canada Child Tax Benefit (CCTB) was rife with this form of regressive transfer. Also the HC measure does not increase if a portion of income from a poor person is transferred to a rich income person.

The weakness of the poverty gap measure is that it satisfies the principle of transfers in only particular cases. Depending upon the depth of poverty of a person in relation to the mean (average) income of those below the poverty line, if that person is lifted above the poverty line the poverty gap measure may either increase or decrease.<sup>31</sup>

On the other hand the Sen Index satisfies the principle of transfers. If a currency unit from the richest to the poorest occurs the Sen Index decreases. The index will decrease even more if the person rises above the poverty line<sup>32</sup>. The index therefore decreases with progressive transfers and increases with regressive transfers.<sup>33</sup>

The Sen Index for 2009 and 2015 for the province of Saskatchewan:

- In 2009 the average income of the poor is 69% of the poverty line.
- For 2009 the Sen Index of poverty using the Total Income After Tax variable is  $S = .265$
- In 2015 the average income of the poor is 69.1% of the poverty line.
- For 2015 the Sen Index of poverty using the Total Income After Tax variable is  $S = .259$ .

Concluding from the above statistics, the economic position of the poor did not improve dramatically through the economic boom from its peak in 2009 till its end in 2014, and social transfer programs are not significantly addressing the incidence of poverty and the depth of poverty in Saskatchewan.

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<sup>29</sup> Lorenzo Giovanni Bellù & Paolo Liberati, “Impacts of Policies on Poverty: Basic Poverty Measures.” *Food and Agriculture Organization of the United Nations*. 2005, FAO, p. 8.

<sup>30</sup> Lorenzo Giovanni Bellù & Paolo Liberati, “Impacts of Policies on Poverty: Basic Poverty Measures,” 8-9.

<sup>31</sup> Lorenzo Giovanni Bellù & Paolo Liberati, “Impacts of Policies on Poverty: Basic Poverty Measures,” 10.

<sup>32</sup> For this study we use the most common measure of poverty which is based upon one-half the median income adjusted for family size. This corresponds to the Low Income Measure (LIM) employed by Statistics Canada.

<sup>33</sup> Lorenzo Giovanni Bellù & Paolo Liberati, “Impacts of Policies on Poverty: Generalized Poverty Gap Measures.” *Food and Agriculture Organization of the United Nations*. 2005, FAO, 12-13.

Whatever economic growth in terms of Total Income in Saskatchewan may have occurred during the peak year of the economic boom of 2009 until the end of the growth cycle in 2014, it was not distributed evenly.

Statistics Canada identified this event as Saskatchewan stepping into a new era of prosperity,<sup>34</sup> however that statement requires a qualifier. The same applies to Statistic Canada's claim that Saskatchewan consumers have gone on a buying binge, leading provincial growth in retail, housing and auto sales. That may have been true for some of the income earners in the province however it's difficult to imagine how to reconcile a buying binge with the following information:

64,000 of the 261,000 children in Saskatchewan were in poverty in 2014, a child poverty rate of 24.6 per cent. This is well above the child poverty rate of 18.5 per cent for Canada as a whole and is greater than in all other provinces and territories with the exception of Manitoba and Nunavut. Children in lone parent families had a poverty rate of 57.9 per cent.<sup>35</sup>

The application of measures of inequality to income distribution in Saskatchewan for the years 2009 and 2015 counter the neoliberal argument that economic growth, by itself, is sufficient to reduce inequality and decrease poverty levels. Income inequality is not going away, and recent events indicate that the issue can and will be exploited by craven politicians and billionaires under the banner of far right populism. This is a dangerous moment.

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### **An Example of the Methodology in the Calculation a Theil Index Element.**

Concerning methodology, the Theil index is calculated by taking the population share of provincial income by each decile, finding it's quotient, its natural logarithm and multiplying them all together to determine each element's contribution to the Theil Inequality Index. For an example of the Theil calculation, for 2015 there were 46,462 'families' in the lowest 10% income decile out of a total of 461,785 'families' in the province. The **population share** of the Lowest 10% is  $46,462 / 461,785 = .1006139$ . In other words the Lowest 10% Income Decile contained about 10% of the Total Income Decile population for Saskatchewan in 2015. Nothing surprising since the provincial income is separated into equal deciles and each group should equal 10%. The **quotient** of the Lowest 10% Income Decile and the Total Income

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<sup>34</sup> Statistics Canada, "Study: Resource boom in Saskatchewan and Newfoundland and Labrador." *The Daily*. Ottawa. May 15, 2008.

<sup>35</sup> Paul Gingrich, Garson Hunter, & Miguel Sanchez, M. 'Child and Family Poverty in Saskatchewan: November 2016,' Social Policy Research Centre, University of Regina, 2016. < <https://campaign2000.ca/wp-content/uploads/2016/11/SASKReportCard>>

Decile is the Median Income Decile (\$13, 708) divided by the Overall Median Income (\$68,400). Therefore for the Lowest 10% Income Decile the quotient is  $\$13,708 / \$68,400 = .1930994$  or approximately .20. In other words the Lowest Income Decile median income was 20% (\$13,708) of the overall provincial median income (\$68, 400) for 2015. The next step is to calculate the **natural logarithm** of the Lowest Income Deciles median income. It's just  $\ln(.20) = \log_e(.20) = -1.6094379124341003$ . We now have everything required to calculate the Lowest 10% Income Decile Contribution to Inequality; it's the **population share** multiplied by the **quotient** multiplied by the **natural logarithm**;  $.1006139 * .20 * -1.6094379124341003 = -0.0340264899035571$  or -.03 (known as a Theil Element) to the Theil Index.



APPENDIX B  
Saskatchewan Poverty Report  
Canada's Official Poverty Line: The Market Basket Measure

On August 21, 2018 the Canadian media reported that the government of Canada had vowed to reduce Canada's poverty rate by 50% by the year 2030.<sup>36</sup> Also, the media reported that the government was going to do so with no new spending or policy promises. The government pointed to previously announced federal programs that would reach that goal. Those programs included the child benefit program, the worker's benefit program and the Guaranteed Income Supplement. The same news reports also mentioned that the Canadian government had adopted Canada's first Official Poverty Line, the Market Basket Measure (MBM). This is an interesting decision, since no other region on the planet uses the Canadian MBM as a measure of poverty. For example, the United Nations and the Organisation for Economic Co-operation and Development (OECD) along with most of the world use a measure of poverty based upon 50% of the median income. The 50% of the median income is a relative measure of poverty (MBM and similar measures are argued to be absolute measures) that Statistics Canada produces every year; it's called the *Low Income Measure After Tax* (LIM-AT).

Although the authors of this report are not certain that the existing programs will eliminate poverty, we would like to argue that a significant reduction in poverty by 2030 could be achieved just by adopting the MBM as Canada's official poverty measure with absolutely no new spending. Our suggestion is in keeping with the government's promise to cut Canada's poverty rate in half by 2030 with no new spending or policy promises. However rather than counting on existing program, the government can just adopt the MBM to achieve the same success.

Absolute measures of poverty differ from relative measures of poverty in that they are not linked to a community standard of living.<sup>37</sup> Rather these measures determine the absolute minimum an individual or a family needs to survive. In actuality, absolute poverty measures are always relative poverty measures because of the decisions that are made as to what constitutes an absolute minimum. How many socks, how many shoes and how much milk to buy are all relative judgements; judgments that are made by the developers of absolute poverty measures.

In May 2003, Statistics Canada introduced its own absolute low-income measure: the Market Basket Measure (MBM). The MBM was not produced as a result of requests from a large number of advocacy groups and researchers. Rather, the measure was developed in response to a 1997 request of the Federal/Provincial/Territorial Ministers Responsible for Social Services (Human Resources Development Canada [HRDC], 2003, p. 1). As an absolute measure, the MBM approach is an attempt to determine how

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<sup>36</sup> "Liberals vow to lift 2 million Canadians out of poverty by 2030, with no new spending." CBC, August, 21, 2018. <<https://www.cbc.ca/news/politics/poverty-strategy-low-income-1.4792808>>

<sup>37</sup> The following section is from "Child poverty and the Canadian welfare state." Garson Hunter, in Anne Westhues and Brian Wharf eds., 2012, Wilfrid Laurier University Press, pp. 167-191.

much disposable family income<sup>38</sup> is required for a pre-determined, specific basket of goods and services. The HRDC market basket measure includes five types of expenditures: 1) food; 2) clothing and footwear; 3) shelter; 4) transportation; and 5) other household needs (e.g., school supplies, personal care products, telephone, furniture).

The MBM is calculated with a referent family, comprised of two adults (one male and one female) aged 25-49, and two children (a girl aged 9 and a boy aged 13). All other household configurations are calculated using a formula based on the Low Income Measure (LIM) equivalence scale. A family of four has an equivalence scale value of 2. A single person has an equivalence value of 1. Therefore it is postulated by Statistics Canada that a family of four requires twice as much income as a single adult (HRDC, 2003, pp. 34-35). The MBM then establishes thresholds, which are the sum of costs for the predetermined basket of goods and services for the selected communities and community sizes across the ten provinces. Economic families that are below the MBM thresholds are considered low income.

Several issues with the MBM approach should be raised in the context of the Low Income Cut Offs (LICO) measure. First, although the MBM is considered an absolute approach to poverty measurement, it is actually a relative measure because it must be decided what constitutes a basket of goods and services. Any number of subjective opinions comprises what should and should not be in the market basket. All measures of poverty, in this sense, are relative. However, the larger problem is that the MBM approach does not account for the growing disparity of income between the rich and the poor. The income and wealth of the rich recede from scrutiny when consideration is focused on what constitutes a reasonable MBM basket of goods and services. Relative measures of poverty have the advantage of rising with the growth of economic expansion rather than the Consumer Price Index (inflation) on a fixed basket of goods and can capture growth in income disparity<sup>39</sup>. This can be illustrated using the example of the province of Saskatchewan.

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<sup>38</sup> The MBM defines disposable family income as the sum remaining after deducting from the total household income the following: total income taxes paid; the personal portion of payroll taxes; other mandatory payroll deductions such as contributions to employer-sponsored pension plans, supplementary health plans and union dues; child support and alimony payments made to another household; out-of-pocket spending on child care; and non-insured but medically-prescribed health-related expenses such as dental and vision care, prescription drugs and aids for persons with disabilities (HRDC, 2003, p. 4). As such, the MBM definition of disposable household income would appear to more closely reflect available funds than the after-tax LICO.

<sup>39</sup> The Low Income Measure After Tax is set at 50% of the median income adjusted for family size (square root). As median income grows (rises) then the poverty measure will reflect that growth, being established at the 50% level.

**Table 1: Total Income Distribution Saskatchewan, 2009 and 2015**

Deciles	Upper Income Cut-off		Percent Income Share		Cumulative Percent	
	2009	2015	2009	2015	2009	2015
Lowest 10%	\$17,225	\$19,750	1.6%	1.4%	1.6%	1.4%
2 <sup>nd</sup> 10%	\$24,450	\$31,650	2.9%	3.0%	4.5%	4.4%
3 <sup>rd</sup> 10%	\$32,975	\$43,425	4.1%	4.4%	8.6%	8.8%
4 <sup>th</sup> 10%	\$43,200	\$55,000	5.4%	5.7%	14.0%	14.4%
5 <sup>th</sup> 10%	\$55,000	\$68,400	7.2%	7.0%	21.2%	21.4%
6 <sup>th</sup> 10%	\$68,750	\$84,500	8.5%	8.9%	29.7%	30.3%
7 <sup>th</sup> 10%	\$85,400	\$103,275	11.0%	10.8%	40.7%	41.1%
8 <sup>th</sup> 10%	\$106,550	129,525	13.6%	13.4%	54.3%	54.5%
9 <sup>th</sup> 10%	\$138,775	\$170,075	17.3%	17.0%	71.6%	71.5%
Highest 10%						
90%-95%	\$170,875	\$214,500	10.9%	11.0%	82.5%	82.5%
96%-99%	\$280,550	\$345,000	11.8%	12.1%	94.3%	94.6%
Top 1%	none <sup>40</sup>		5.7%	5.4%	100%	
(gini coefficient)	0.412	0.409				
(gini index)	41.2%	40.9%				

The five population Market Basket Measure Threshold Income Cut-offs for the province of Saskatchewan are displayed below for 2009 and 2015.

**Table 2: Market Basket Measure Threshold Income Cut-offs, Current Dollars**

Population Center	Upper Income Thresholds Current Dollars	
	2009	2015
Rural	\$32,081	\$37,558
Under 30,000	\$33,009	\$38,658
Between 30,000 and 99,999	\$30,745	\$36,431
Saskatoon	\$32,506	\$38,110
Regina	\$31,583	\$37,613

Source: Statistics Canada. *Table 11-10-0230-01 Market Basket Measure (MBM) thresholds for reference family, by Market Basket Measure region and component, in current dollars and constant dollars.*

<sup>40</sup> Naturally there is no upper income cut-off for the top one per cent.

Source: Calculated by the authors using Statistics Canada *Survey of Labour and Income Dynamics 2009* micro data file and the *Canadian Income Survey 2015* micro data file.

If the Income Distribution Cut-offs are juxtaposed with the Market Basket Measure Threshold Income Cut-offs the issue becomes obvious. Only the bottom three income deciles are utilized as the income cut-offs do not reach higher. The five Population Centers used by Statistics Canada are averaged to account for the regional differences: 2009 (159,924 / 5 = **\$31,985**) and for 2015 (188,370 / 5 = **\$37,674**).

**Table 3: Growing Gap Between Income Deciles Compared to Corresponding MBM cut-offs**

Deciles	2009 Upper Income Cut-off	2015 Upper Income Cut-off
Lowest 10%	\$17,225	\$19,750
2 <sup>nd</sup> 10%	\$24,450	\$31,650
3 <sup>rd</sup> 10%	<b>\$32,975</b>	<b>\$43,425</b>
<b>Gap: Income decile compared to MBM cut-offs</b>	\$32,975 - <b>\$31,985</b> = \$990 Difference between Upper Income and MBM Cut-off is \$990 or 3.0%	\$43,425 - <b>\$37,674</b> = \$5,751 Difference between Upper Income and MBM Cut-off is \$5,751 or 13.24%
4 <sup>th</sup> 10%	\$43,200	\$55,000

Therefore as the economy grows over time less and less of the overall expansion represented by income growth reaches the poorest section of society. In effect they become ghettoized into a fixed strata of lower income while the economy continues to grow. This clearly illustrates the strength and the logic of relative measures of poverty. The relative measures are tied to the growth of the economy and illustrate how that growth is distributed.

To further illustrate this point, let's examine the performance of the relative measure of poverty that has been used for many years in Canada, Low Income Measure – After Tax. The income cut-offs for the years 2009 and 2015 are in bold.

**Table 4: Low Income Measure–After Tax Cut-offs 2009 - 2015 Current Dollars**

<b>Canada</b>							
<b>Current dollars</b>							
<b>Income Cut-offs</b>							
<b>Household size<sup>1</sup></b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
1 person	18,876	19,239	20,027	20,785	21,019	21,773	22,352
2 persons	26,695	27,208	28,322	29,394	29,725	30,792	31,611
3 persons	32,694	33,323	34,688	36,001	36,406	37,712	38,715
<b>4 persons</b>	<b>37,752</b>	38,478	40,054	41,570	42,038	43,546	<b>44,704</b>
5 persons	42,208	43,020	44,782	46,477	47,000	48,686	49,981
6 persons	46,237	47,126	49,056	50,913	51,486	53,333	54,751
7 persons	49,941	50,902	52,986	54,992	55,611	57,606	59,138
8 persons	53,389	54,416	56,645	58,789	59,451	61,583	63,221
9 persons	56,628	57,717	60,081	62,355	63,057	65,319	67,056
10 persons	59,691	60,839	63,331	65,728	66,468	68,852	70,683

1. To convert to other household sizes, multiply the value for a "1 person household" by the square root of the desired household size.

**Source:** Statistics Canada. *Table 11-10-0232-01 Low income measures (LIMs) by income source and household size in current dollars and 2016 constant dollars*

Returning to the Total Income Distribution Chart above, adding the relative measure of poverty that has been used for many years in Canada, the Low Income Measure – After Tax (LIM-AT) and comparing it to the Market Basket Measure Threshold Income Cut-offs (MBM) illustrates the concern. Table 5 below uses the Total Income Distributions for 2009 and 2015.

**Table 5: LIM-AT Compared to MBM Income Thresholds - Total Income Distributions for 2009 and 2015, Current Dollars**

Deciles	2009			2015		
	Income Cut-off	MBM	LIM-AT	Income Cut-off	MBM	LIM-AT
Lowest 10%	\$17,225			\$19,750		
2 <sup>nd</sup> 10%	\$24,450			\$31,650		
<b>3<sup>rd</sup> 10%</b>	<b>\$32,975</b>	<b>\$31,985</b>		<b>\$43,425</b>	<b>\$37,674</b>	
4 <sup>th</sup> 10%	\$43,200		<b>\$37,752</b>	\$55,000		<b>\$44,074</b>

Notice how the LIM-AT is set at a higher level than the MBM measure at its income cut-off threshold, and it rises in relative position to the growth in the economy. This is due to the measure being set at 50% of the median income. As the median income rises the LIM-AT Cut-offs rise. Looking at the data, the MBM measure increased **\$5,689** between 2009-2015 whereas the LIM-AT increased by **\$6,322** during the same period of time. The difference in growth rate of the poverty line measures in relation to growth in the Saskatchewan economy between 2009 and 2016 is \$623 or \$104 per year ( $\$6,322 \text{ (LIM-AT)} - \$5,699 \text{ (MBM)} = \$623$ ). If this change in levels was to be held constant, by 2030 the LIM-AT would have outpaced the MBM by an additional \$1,456 for total difference of \$2,079 between 2009 and 2030. That scenario is unlikely however because it can't account for the potential changes in inflation rates, economic growth, changes in tax policy, changes to the MBM methodology etc.

It's also worth noting the LIM-AT Cut-off falls in the fourth income decile rather than the MBM which falls in the bottom third income decile. Without tying the MBM to a fixed ratio of the LIM-AT, it's relationship to economic growth will diminish and the rates of poverty will fall without any meaningful intervention by the federal/provincial governments. The rates of poverty will diminish as an artifact of the measure being pegged at a certain moment of time and the measure becoming disconnected from the growth in the economy.

Also worth noting is that the LIM-AT cut-off is also losing ground to its corresponding income decile upper income cut-off. This is similar to the MBM. In 2009 the top 20% of the population received 45.7% of the Total Income and the bottom 80% received 54.3% of the Total Income. For 2015 the top 20% of the population received 45.5% of the Total Income and the bottom 80% received 54.5% of the Total Income. A huge disparity of total income received exists between the top 20% and the bottom 80%, and this did not change between 2009 and 2015.

The following table lists Market Basket Measure (MBM) thresholds for economic families and persons not in economic families, 2016, Saskatchewan:

**Table 6: Market Basket Measure (MBM) Income Thresholds for Saskatchewan, 2016**

	Persons not in economic families	2 Persons	3 Persons	4 Persons	5 Persons
Rural areas	18,511	26,178	32,062	37,023	41,392
Small population centres with less than 30,000 persons	19,060	26,995	33,013	38,120	42,619
Medium population centres with a population between 30,000 and 99,999 persons	17,946	25,379	31,083	35,892	40,128
Saskatoon (CMA)	19,016	26,893	32,937	38,032	42,521
Regina (CMA)	18,907	26,738	32,748	37,815	42,277

**Source:** Statistics Canada. Table 11-10-0230-01 Market Basket Measure (MBM) thresholds (2011 base) for reference family, by Market Basket Measure region and component, in current dollars and 2016 constant dollars *for the 4 person reference*

family. All other calculations performed by the report authors. At the time of writing the authors could only find the income thresholds for the MBM reference family of four.

With the reference family it is easy to calculate the income thresholds for all family sizes. The first step is to calculate the square root of the reference family of 4, which is 2. Divide the income threshold of the reference family of 4 (ex. \$37,023) by 2 which equals \$18,511. Using \$18,511 it's a simple calculation to calculate the income threshold for all other family sizes. If the family size is 6, the square root of 6 is 2.4495. \$18,511 x 2.4495 equals an income threshold of \$45,342.

The following table lists Market Basket Measure (MBM) thresholds for the reference family of four in constant and current dollars for the period of 2012- 2016, Saskatchewan:

**Table 7: Market Basket Measure (MBM) Income Thresholds Saskatchewan, 2012-2016 Constant and Current Dollars**

Geography	2016 Constant dollars					Current dollars				
	Total Threshold					Total Threshold				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
<b>rural population under 30,000</b>	37,782	37,603	37,202	37,971	37,023	35,410	35,744	36,224	37,558	37,023
<b>population 30,000 to 99,999</b>	38,886	38,720	38,312	39,083	38,120	36,444	36,806	37,305	38,658	38,120
<b>Saskatoon</b>	36,107	36,045	36,016	36,832	35,892	33,840	34,263	35,069	36,431	35,892
<b>Regina</b>	38,288	38,451	38,514	38,567	38,032	35,917	36,446	37,356	38,110	38,032
	36,820	37,328	37,235	38,027	37,815	34,508	35,584	36,327	37,613	37,815

**Source:** Statistics Canada. Table 11-10-0230-01 Market Basket Measure (MBM) thresholds (2011 base) for reference family, by Market Basket Measure region and component, in current dollars and 2016 constant dollars

What stands out in stark contrast is that according to the figures provided by Statistics Canada the cost of living decreased in 2016 across the province of Saskatchewan. The following tables break down the MBM income thresholds by its constituent components of food, clothing, shelter, and in constant and current dollars. Readers may judge for themselves whether those items cost less in 2016 than 2015.

### FOOD

Geography	2016 constant dollars					current dollars				
	Food					Food				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
<b>rural population under 30,000</b>	11,169	11,136	11,259	11,841	11,359	10,468	10,586	10,963	11,712	11,359
<b>population 30,000 to 99,999</b>	11,169	11,136	11,259	11,841	11,359	10,468	10,586	10,963	11,712	11,359
<b>Saskatoon</b>	11,169	11,136	11,259	11,841	11,359	10,468	10,586	10,963	11,712	11,359
<b>Regina</b>	11,297	11,354	11,552	11,732	11,477	10,598	10,762	11,205	11,593	11,477
	10,719	11,030	11,178	11,489	11,278	10,046	10,515	10,905	11,364	11,278

## CLOTHING

Geography	2016 constant dollars					current dollars				
	Clothing					Clothing				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
rural	2,315	2,259	2,125	2,014	2,054	2,170	2,147	2,069	1,992	2,054
population under 30,000	2,315	2,259	2,125	2,014	2,054	2,170	2,147	2,069	1,992	2,054
population 30,000 to 99,999	2,315	2,259	2,125	2,014	2,054	2,170	2,147	2,069	1,992	2,054
Saskatoon	2,313	2,265	2,133	2,016	2,054	2,170	2,147	2,069	1,992	2,054
Regina	2,315	2,252	2,121	2,014	2,054	2,170	2,147	2,069	1,992	2,054

## TRANSPORTATION

Geography	2016 constant dollars					current dollars				
	Transportation					Transportation				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
rural	5,579	5,451	5,131	5,056	5,009	5,229	5,182	4,996	5,001	5,009
population under 30,000	5,579	5,451	5,131	5,056	5,009	5,229	5,182	4,996	5,001	5,009
population 30,000 to 99,999	2,433	2,404	2,464	2,432	2,415	2,280	2,285	2,399	2,406	2,415
Saskatoon,	2,911	2,873	2,887	2,841	2,864	2,731	2,723	2,800	2,807	2,864
Regina,	2,491	2,454	2,403	2,789	3,044	2,335	2,339	2,344	2,759	3,044

## SHELTER

Geography	2016 constant dollars					current dollars				
	Shelter					Shelter				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
rural	8,555	8,659	8,600	8,618	8,493	8,018	8,231	8,374	8,524	8,493
population under 30,000	9,658	9,777	9,710	9,730	9,589	9,052	9,294	9,455	9,624	9,589
population 30,000 to 99,999	10,027	10,150	10,081	10,101	9,955	9,397	9,648	9,816	9,991	9,955
Saskatoon	11,507	11,695	11,627	11,617	11,438	10,795	11,085	11,277	11,479	11,438
Regina	11,471	11,580	11,512	11,557	11,391	10,751	11,039	11,231	11,431	11,391



## OTHER EXPENSES

Geography	2016 constant dollars					current dollars				
	Other expenses					Other expenses				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
<b>rural</b>	10,163	10,095	10,087	10,442	10,109	9,525	9,596	9,822	10,328	10,109
<b>population under 30,000</b>	10,163	10,095	10,087	10,442	10,109	9,525	9,596	9,822	10,328	10,109
<b>population 30,000 to 99,999</b>	10,163	10,095	10,087	10,442	10,109	9,525	9,596	9,822	10,328	10,109
<b>Saskatoon</b>	10,258	10,264	10,314	10,362	10,198	9,623	9,729	10,004	10,239	10,198
<b>Regina</b>	9,824	10,011	10,022	10,177	10,048	9,207	9,543	9,778	10,066	10,048

The same formula for converting the MBM reference family of 4 to any family size applies. Take the figure of interest, (ex. 2016 shelter cost of \$10,173 and divide by 2 = \$5,087). This would be the shelter for 1 person. For 2 people, use the square root of 2 (1.414) and multiply by \$5,087 which gives the shelter cost of \$7,193. This is a woefully low and unrealistic number, according to Saskatchewan Housing the “Average shelter costs<sup>41</sup> in Saskatchewan on a monthly basis were \$1,136 in 2016, compared to \$1,213 for Canada. Saskatchewan renters paid an average of \$1,021 while homeowners paid \$1,178. Canadian renters paid an average of \$1,002 compared to \$1,313 among homeowners.”<sup>42</sup>

The low shelter cost estimates are no accident, they are designed into the MBM formula based on what the government called the *First Comprehensive Review of the Market Basket Measure of Low Income Final Report*.<sup>43</sup> This review had a dramatic impact in lowering the level of poverty when using the MBM because the review fundamentally changed how shelter costs were calculated after this review, what the government refers to as rebasing a measure.

The MBM’s shelter component was rebased by a combination of two factors: weighting the formula more strongly toward a family of four having a two rather than three bedroom apartment; and assuming that some low income families owned rather than rented their accommodation. Consideration was also given to further adjusting the shelter component to account for families living in rent geared to income (RGI) accommodation.<sup>44</sup>

<sup>41</sup> Shelter costs include, where applicable, rent or mortgage payments, electricity, heat, water and other municipal services, property taxes and condominium fees.

<sup>42</sup> *Saskatchewan Housing 2016 Census of Canada*, Saskatchewan Housing, October 25, 2017, <[www.publications.gov.sk.ca/redirect.cfm?p=86690&i=104387](http://www.publications.gov.sk.ca/redirect.cfm?p=86690&i=104387)>

<sup>43</sup> *First comprehensive review of the market basket measure of low income : final report*. Michael Hatfield, Wendy Pyper, and Burton Gustajtis. June 2010. <HS28-178-2010-eng.pdf>

<sup>44</sup> *Issue Update: The Market Basket Measure - Rebased or Debased?* John Kolkman, Edmonton Social Planning Council. Winter 2011. <<https://edmontonsocialplanning.ca/~edmont65/index.php/our...edition-of.../file>>

The rebasing of the shelter component of the MBM (2011) is inadequate and diminishes the usefulness of this measure. There's nothing to prevent governments from rebasing the MBM measure sometime in the future.

The MBM is an inadequate measure of poverty. Dozens of arbitrary decisions go into deciding what to include in its market basket, the shelter calculation is unsophisticated and the measure is not linked to growth in the economy. In fact, the whole idea of a poverty measure is not useful towards achieving social, economic and environmental justice. The focus needs to shift towards inequality, the capriciousness of the super wealthy and the rest of the population is where attention should shift.