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Short communication

Impact of Education on Family Income in First Nations Communities

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Abstract

Our days, the globalizing labour market requires educated professionals. Individuals with high school and post-secondary diplomas have higher potential when it comes to adapting to rapid change in technology and economy. Canada, like other member countries of the Organization for Economic Co-operation and Development (OCED) has no alternative but to improve the knowledge and skills of its labour force, increase productivity and support world class research. Canadian governments, at all levels, are interested in developing human resources in urban and rural communities to meet the demand of their domestic labour markets. The impact an individual's level of education has on their employment opportunities and income has been studied by many scholars. However, the review of suitable literature indicates that there is a need for analogical research in First Nations communities. Within the presented project we have analyzed the correlation between level of educational level, income range, and employment rate in Kahkewistahaw, Muskeg Lake and Fairchild (Lac La Ronge) First Nations communities. The project was supported by the Social Sciences and Humanities Research Council (SSHRC) of Canada within the Aid for Small Universities program.

Keywords: First nations, education, income, family income, labour market, educational attainment, employment.

1. Introduction

By this article we continue a series of our investigations on an application of statistical techniques to some sociological problems, especially to Fist Nations Communities in Canada, cf. Sardarli (2008, 2010, 2011, 2017).

Our days, the rapid progression of technology causes the restructuring of national and international labour markets. The globalized marketplace demands highly educated professionals. Thus, an individual's competitiveness in the labour market, their employment status, and income become more and more dependent on their level of education. Highly-skilled positions are competed for more than low-skilled, poorly paid positions (Schleicher 2006). The minimum qualification now

required is a high school diploma. This diploma opens the door to higher learning and the labour market. To gain access to the increasingly demanding labour market, a postsecondary education is virtually essential (Shaienks et al. 2006).

The increasing impact education has on the labour market, has fired interest in the evolving relationship between educational attainment and income (Paquette 1999). Analysis of the Canadian census shows the relationship between educational attainment and employment income. The data shows trends similar to those found in other member countries of the Organization for Economic Co-operation and Development (OECD). It would be logical to assume that a higher level of education cause higher income. A positive relationship between education and labour market outcomes has been recognized in Canada, where a postsecondary education is seen as a path to higher wages, employment stability and social integration while also allowing for economic economic growth and prosperity for the country as a whole (Zeman et al. 2006). Because of this, "universal access to postsecondary education, for those who qualify, is an important ideal in Canadian society" (Lambert et al. 2004).

However one has to note that not all observations substantiate a linear monotonic relation between an individual's level of education and income. For example, Zeman et al. (2006) have examined the highly-educated, low-earning populations in Ontario and Canada in 2006 – who they are and what they are doing. The starting point was the observation that both Canada and Ontario ranked first amongst a number of OECD countries in terms of the percentage of both college and university graduates aged 25 to 64, with non-zero earnings, who earned less than half the national median employment earnings in 2006. This finding raised questions about who the low-earning postsecondary-educated individuals are and what factors might explain their low-earnings status.

Among the many factors determining income, the region's economic situation, the community's labour market status and the residing individual's social status, deserve mention. In particular, gender status, age, and belonging to immigrant or aboriginal groups effect an individual's employment (Human Resources and Skills Development Canada 2011). Taking this into account one may assume that the impact of educational attainment on an individual's income differs for different demographics. In our opinion studying the effect of various levels of education on the employment rate and family income for different social groups would be interesting. The goal of the presented research project is to observe and analyze the dependence of family income on the level of education of family members in first nations communities.

2. Method and Results

Within the presented research project we have included surveys we accomplished in Fairchild (Lac La Ronge), Kahkewistahaw and Muskeg Lake First Nations communities. In order to receive an objective relationship between a family's level of education and income we choose communities with varying economical, geographical and social features. For instance, Fairchild (Lac La Ronge) is situated on the north of Saskatchewan, whereas Muskeg Lake is part of Central Saskatchewan, and Kahkewistahaw is in south-eastern Saskatchewan. Fairchild (Lac La Ronge) and Muskeg Lake can be considered relatively small communities with approximately thirty and forty households respectively while Kahkewistahaw is quite large, with approximately one hundred forty households, stores, community schooling, health centres and a well developed infra-structure.

Ten-question questionnaires were distributed among the households of Fairchild (Lac La Ronge), Kahkewistahaw and Muskeg Lake First Nations communities. Detailed statistical analysis of the completed questionnaires (with all answers) has been completed and reported in Sardarli (2011).

Along with other questions, the respondents were asked,

(i) How many of the family members have high school or post-secondary diploma?

(ii) What was their family income for 2009 (less than $10 000, $10 000-$20 000, $20 000-$30 000, $30 000-$40 000, $40 000-$50 000, $50 000-$60 000, $60 000-$70 000, higher than $70 000)?

The households involved in the survey had participation percentages of 20%, 29% and 38% for Fairchild (Lac La Ronge), Kahkewistahaw and Muskeg Lake First Nations communities respectively. The average feedback for all three communities was 29%. The questionnaires were distributed (one questionnaire per household) by interviewers. The interviewers were hired for the project from the communities where the survey was held. The respondents were provided with consent letters and envelopes. The consent letters included detailed information about the purpose of the survey, as well as the contact information of the principal investigator. It was noted that the respondents of the survey participated voluntarily and were free to not answer any of the questions in the questionnaire. Within a week the questionnaires were completed anonymously by respondents and returned in sealed envelopes. Therefore the confidentiality of those surveyed was kept. The respondents were informed about the confidentiality of information collected through consent letters and interviews. The diagrams below represent the answers of respondents (Figures 1, 2 and 3).

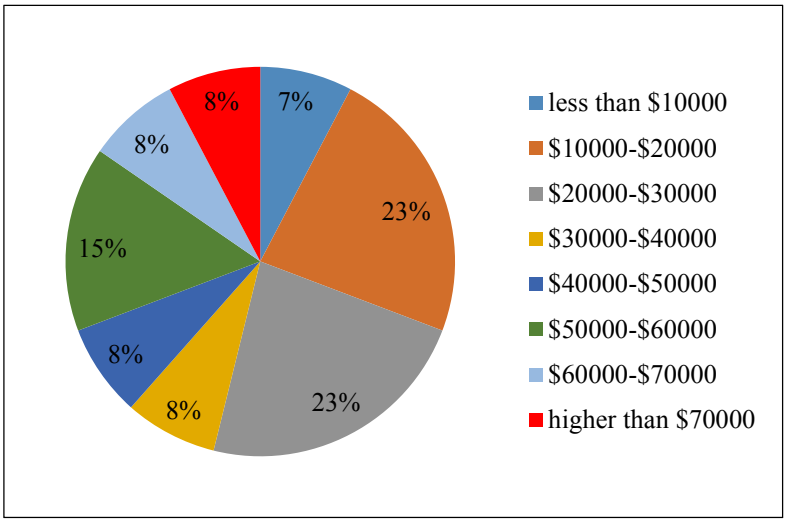

Figure 1 Annual Income of families with no high-school or post-secondary completion

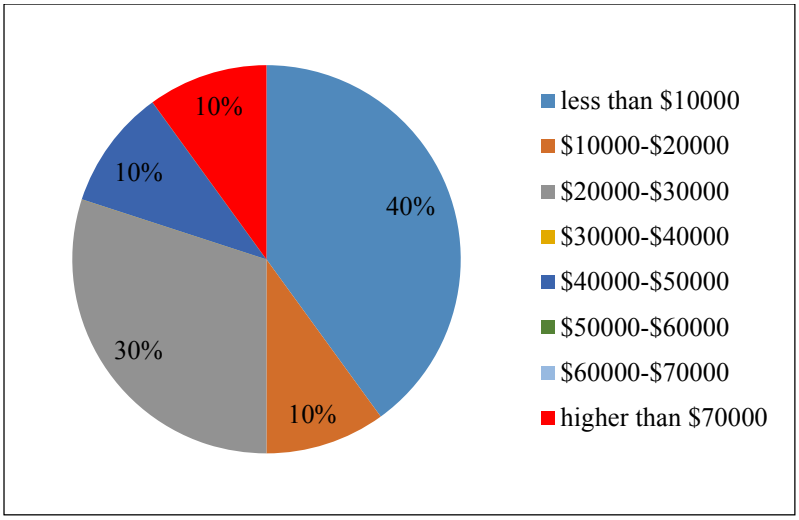

Figure 2 Annual Income of families with one high-school or post-secondary completion

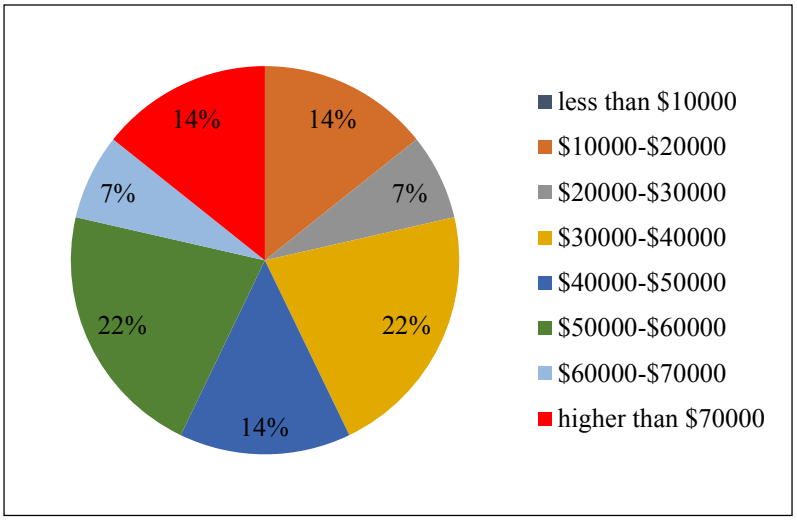

Figure 3 Annual Income of families with two high-school or post-secondary completions

3. Discussion

As one can see from the Figures 1-3, annual income is significantly different in families with no high school or post-secondary completion, with one high school or post-secondary completion, and with two high school or post-secondary completions. The general trend is that, the annual income of families with at least one diploma is higher than in the families with no diploma (Figure 4). For example, 40% of families with no family members who have a high school or post-secondary diploma make less than $10 000 a year whereas only 7% of families with one high school or post-secondary diploma have an income this low.

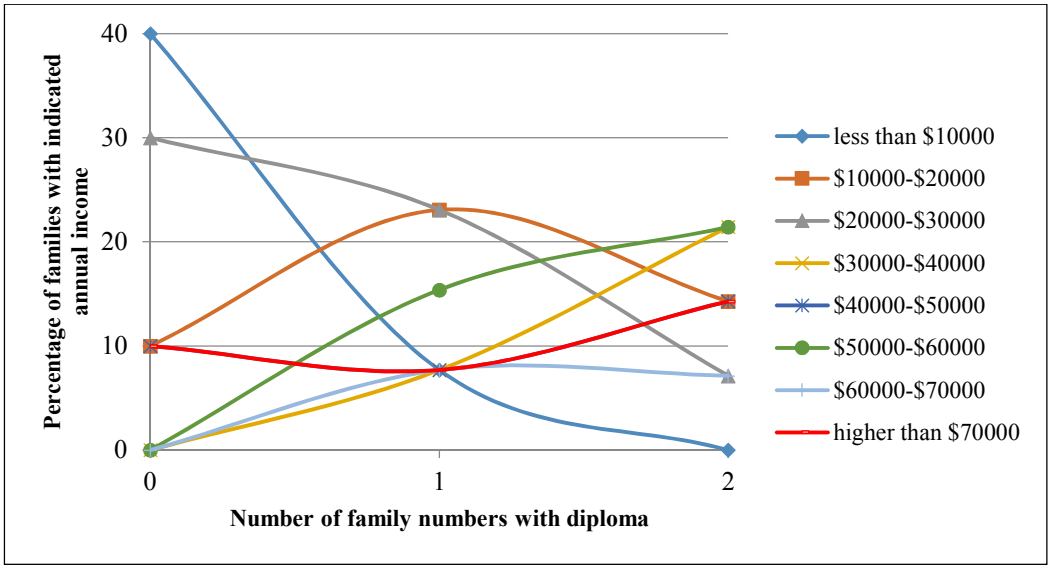

Figure 4 The dependence between the percentage indicated for familial income and number of diplomas [Note: Curves for the income ranges "$40000-$50000" and "higher than $70000" are identical]

If two family members have completed high school or post-secondary institutions, their family income is higher than $10000. The percentage of families with higher incomes (for example, $30000 - $40000, $50000 - $60000) increases as the number of family members with diplomas increase.

It has to be noted that not all curves indicate monotonic dependence on the number of diplomas. For example, the percentage of families with high incomes (higher than $70000 per year) is 8% amongst the families with one diploma while more families (10%) with no diplomas make more than $70 000 during the year. In Zeman et al. (2006) this type of non-monotonic dependence is explained by the presence of one of two predictors: working was not the main activity of some individuals with a diploma or by self-employment status.

We would like to consider another factor to account for this phenomenon. Analysis of Saskatchewan's labour market dynamics indicates that in this province's rapidly growing economy some professions are preferable to others (Ministry of Advanced Education 2009). In other words, the presence of a diploma in some professions does not guaranty a high-salary job. To better understand this phenomenon we needed to structurally analyze the labour market dynamics of the province, which might become a focus of further studies.

The median annual household income in Saskatchewan was an estimated $46705 in 2006 (Smith, 2009). We attempted to estimate the percentage of families (with no diploma, with one diploma, with two diplomas) whose annual income is below this median (approximately $50000) and above it.

Figure 5 indicates the proportion of families earning less and more than $50000 depends strongly on the number of family members who have graduated. This ratio is 90%/10% for families without high school or post-secondary completion; 69%/31% and 57%/43% for the families with one and two diplomas respectively. In other words, 90% of families with no diploma earn less than $50 000, 10% of families with no diploma earn more than $50000. For the families with one diploma these numbers are 69% and 31%; for the families with two diplomas, 57% and 43%, respectively.

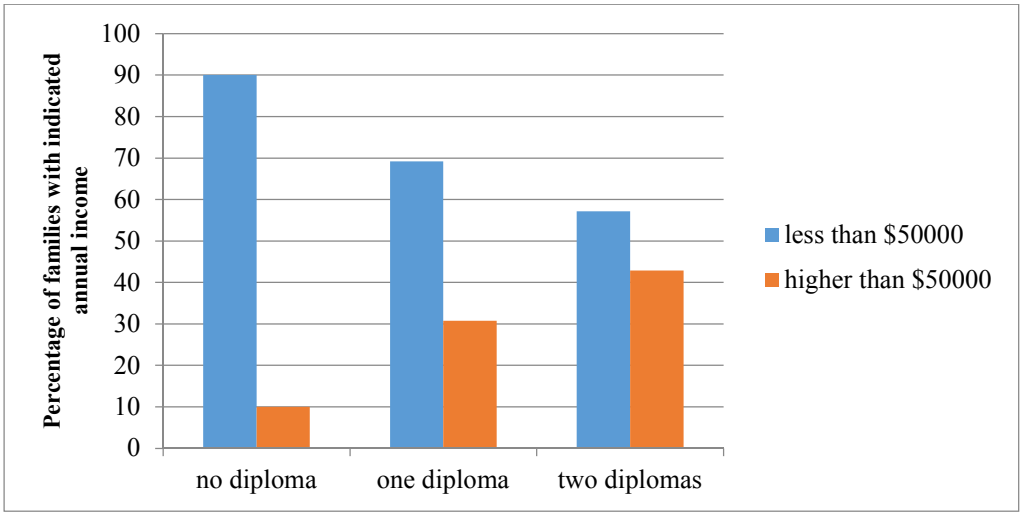

Figure 5 Percentage of families (with no diploma, with one diploma, with two diplomas) whose annual income is below $50000 or above $50000

It has been observed that the employment rate depends significantly on the educational level of the family members. Figure 6 represents the percentage of on and off reserve employment rate in among the households with no, one and two diplomas. One can see from the graph that higher is the educational level, higher is the percentage of employees working off reserves.

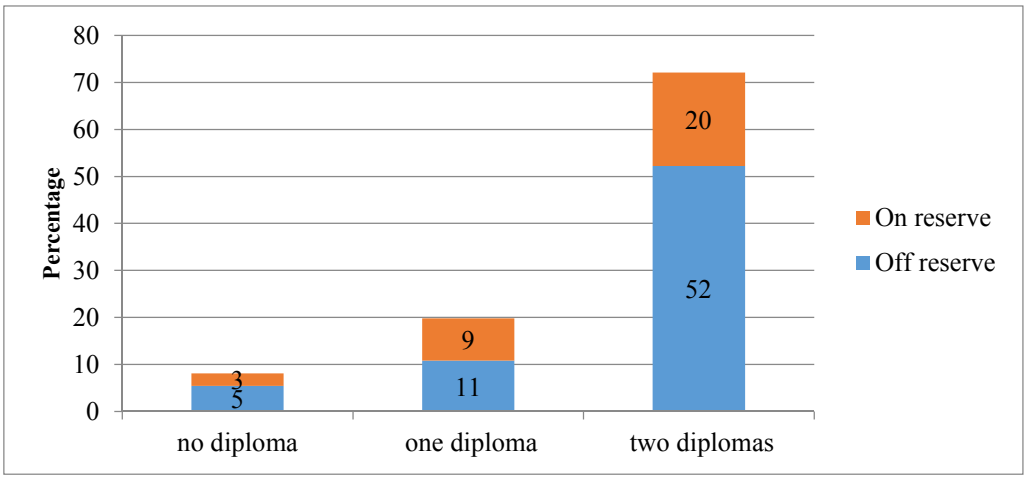

Figure 6 Employment rate vs. Educational level

4. Conclusion

We organized the survey in Fairchild (Lac La Ronge), Kahkewistahaw and Muskeg Lake First Nations communities. 29% of households participated in the survey. Along with the other eight questions the respondents were asked (i) how many family members have completed high school or post-secondary institution and (ii) in which of the listed ranges their annual income lies. It was

observed that families with high school or post-secondary completion diploma(s) have higher earning potential than families with no diplomas at incomes of $50000 or more (provincial medial annual family income). Moreover families with two diplomas exceed the earning potential of the provincial median more than the families with one diploma.

It has been observed that the employment rate depends significantly on the educational level of the family members. One also can conclude that higher is the educational level, higher is the percentage of employees working off reserves. The higher percentage of off reserve employees among the community members with higher educational level might be caused by the deficit of on reserve jobs requiring higher employee qualification.

To achieve a precise picture of the relationship between level of education and family earning potential one needs more detailed information on the employment status of every family member. This could become the focus of new studies and research projects. Based on the results of our studies we can also state education has to be considered a key factor in improving First Nation families' earning potential. In our opinion, to solve the many social problems in aboriginal communities, relevant government institutes have to exploit this factor.

Acknowledgments

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